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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. X.

CHICAGO, ILLINOIS, SEPTEMBER 15, 1891.

No. 3.

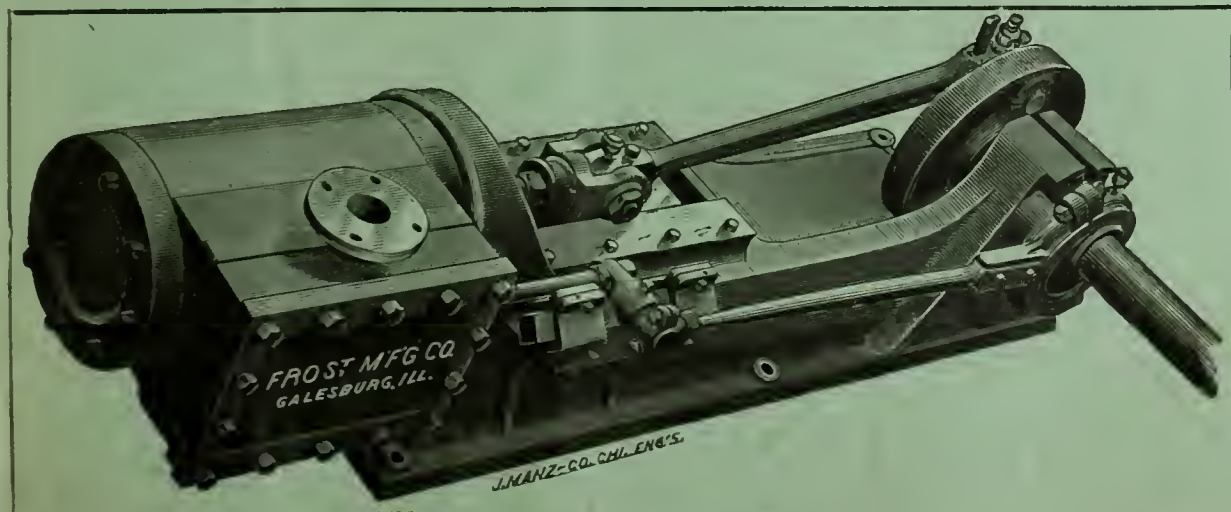
SUBSCRIPTION PRICE,
ONE DOLLAR PER ANNUM.

YOU GET THE BEST

And only the best, when you buy the Eureka Grain Cleaning Machinery. It is built to be the best, it is guaranteed to be the best, it operates the best, and is in every sense the best. More kinds, more styles, more sizes, and suited to more conditions, localities, surroundings and requirements than any other machines for like uses in the world. Have you our new catalogue?

S. HOWES, SOLE BUILDER, **SILVER CREEK, N. Y.**

CONVEYORS	+ + + Elevator Buckets. + + Elevator Roots. + + Elevator Bolts. + + +			BELTING
	 THORNBURGH & GLESSNER 			
	MILL AND ELEVATOR SUPPLIES 110 & 112 SOUTH JEFFERSON STREET, CHICAGO, ILL. Elevating and Conveying Machinery a Specialty.			
	+ + + + PULLEYS. + + + + SHAFTEING. + + + + HANGERS. + + + +			



FOR PRICES AND DISCOUNTS
— ON —
Elevator Machinery
AND SUPPLIES
— OF —
EVERY DESCRIPTION,
ADDRESS EITHER STEAM OR HORSE-POWER,
The FROST MFG. CO.,
GALESBURG, ILL.

THE EXCELSIOR DUSTLESS MACHINERY

WATKINS & CO., COMMISSION GRAIN,
Chamber of Commerce.

PEORIA, ILL., June 14, 1891.

GENTLEMEN:—We have clipped to this date something like 500 carloads of oats with the No. 6 "Excelsior" Combined Clipper and Polisher we bought of you at an expense of only a very few dollars for repairs to replace clipping wallowers. The machine has always been entirely satisfactory to us. We have never had a car of oats go off grade through any fault of the machine. We are buying a great many oats clipped by the Clipper and selling to same parties as those from your Clipper, and their oats have frequent claims made back on us.

Yours truly, WATKINS & CO.

BELLEVUE, IOWA, April 17, 1891.

GENTS:—Since purchasing our No. 5 Excelsior Combined Oat Clipper and Polisher of you in March, 1889, we have clipped and cleaned 150,000 bushels of oats, the loss in clipping averaging 6-10 of a pound per bushel, and we have always got the highest price for No. 2 grade oats, while we make no distinction as to quality in our purchasing, but all going to the same bin. This we consider one of the great advantages of a good Oat Clipper. We have always been well pleased with the machine. Repairs just purchased of you, amounting to \$15.00, is all we have had to pay.

Yours truly, REILING & CO.

HOLSTEIN, IOWA, April 10, 1891.

E. H. PEASE MFG. CO., Racine, Wis.

GENTLEMEN:—In regard to the No. 6 Excelsior Oat Clipper and Polisher, and Separator, I purchased of you last fall, I wish to say that it is highly satisfactory and surpasses my best expectations. I have polished about 150,000 bushels of barley with it, and it does this work very evenly and does not break nor hull the grain. I am now running it on oats that test 28 pounds to the bushel and raise them up to 33 and 34 pounds with a shrinkage of not more than 3 ounces to the bushel.

I hesitated some before buying, but now that I know what it will do, I would not be without it for many times its value. Yours respectfully,

SIGNED, F. S. MANSON.

CHICAGO, ILL., Feb. 24, 1891.

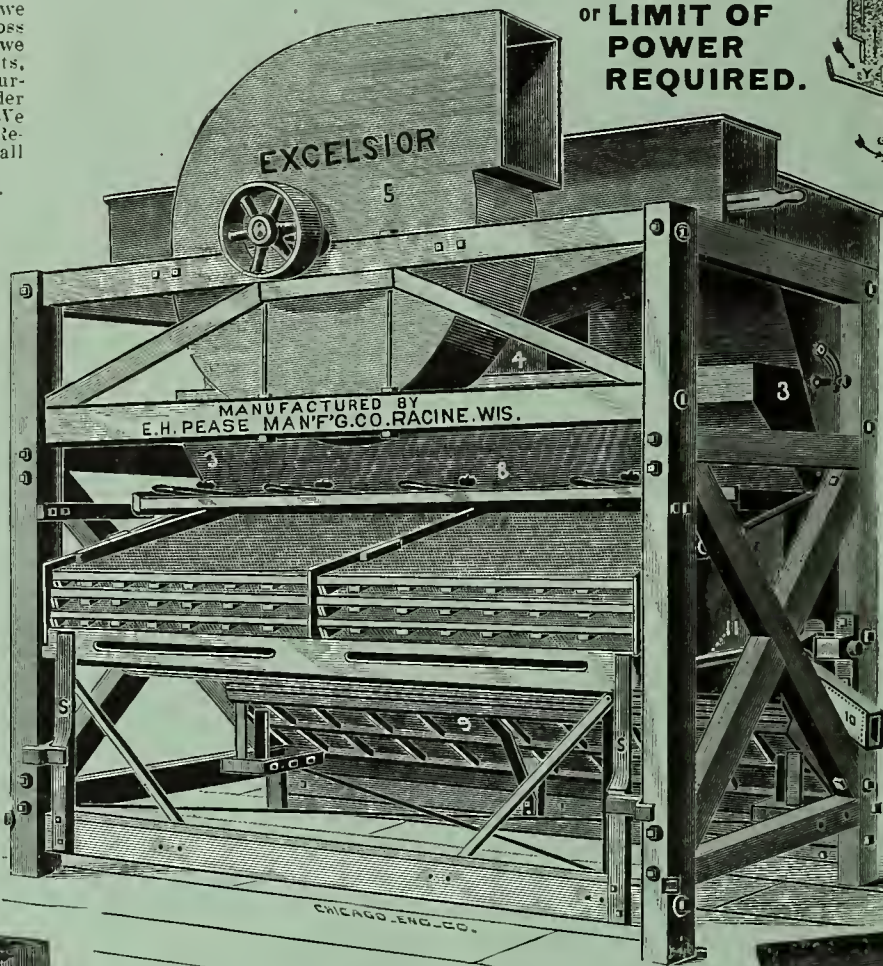
DEAR SIR:

The two No. 8 Excelsior Jr. Oat Clippers we bought of you in June, 1890, are giving splendid satisfaction. We experience no difficulty in raising the weight of oat from 8 to 10 lbs. to the measured bushel. On the 12th inst we run through the two machines a large lot of very foul No. 3 white oats, testing 27 lbs. to the measured bushel, and raised them to a fine bright quality of No. 2 oats, testing 37 lbs.; shrinkage 500 lbs. to 1,000 bushels. The shrinkage being largely "Hulls," and being separated from the dust can be utilized in making ground feed.

On the 18th inst. we run 4,500 bushels of oats through in 3 hours, and raised them from No. 3 white, testing 29 lbs.; to No. 2, testing 38 lbs. Yours truly,

COLUMBIA ELEVATOR CO.,
J. E. CAILEY, Sec'y.

HAS NO SUPERIOR IN POINTS OF
CONSTRUCTION,
DURABILITY,
EXCELLENCE OF WORK,
STILLNESS OF RUNNING,
or LIMIT OF
POWER
REQUIRED.



"Excelsior" Dustless Elevator Separator.

FOR ALL KINDS OF
GRAIN OR SEEDS.

MADE IN 4 SIZES.

CAPACITIES, FROM 300 TO 2,000 BUSHEL PER HOUR.

HAS LARGE SIEVE SURFACE, POWERFUL
FAN AND PERFECT VENTILATION.

GRAIN SHOE IS COUNTER-BALANCED BY
COUNTER-BALANCE SPRINGS

THE SMOOTHEST

—AND—

LIGHTEST RUNNING SEPARATOR

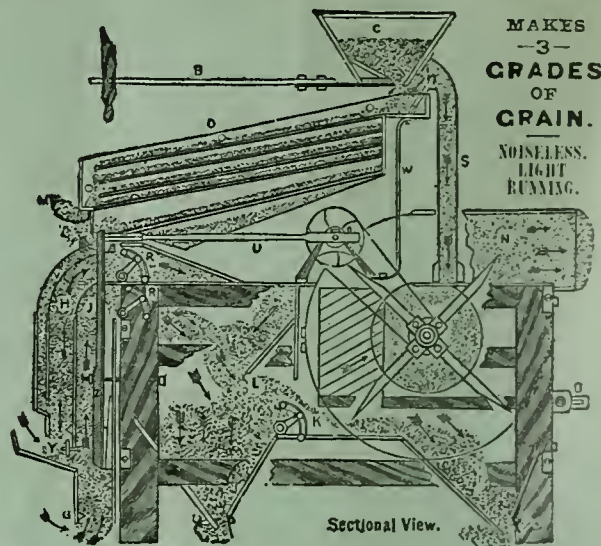
IN THE MARKET.

"ELEVATOR B."

LA CROSSE, WIS., Nov. 6, 1890.

GENTLEMEN:—Have just made a Test Run of Flax over the No. 2 Excelsior Receiver Separator of 775 bushels per hour without crowding. Of course, when flax is very dirty it would require more attention or slower feed. We are very much pleased with the machine on flax and timothy. It adds one-half to the capacity of our flax reels and of our timothy mills.

Yours respectfully, W. B. CLISBY,
Foreman for W. W. CARGILL & BRO.



"Excelsior" Dustless Separator and Grader.

—FOR—

SEPARATING, CLEANING AND GRADING
WHEAT FOR MILLING.

OR ANY KIND OF GRAIN FOR
MERCHANTABLE PURPOSES.

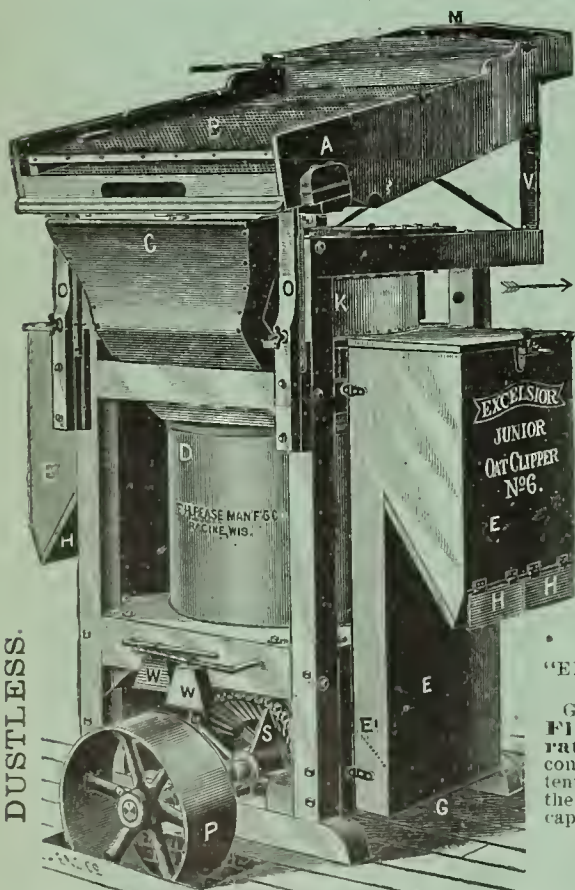
MADE IN 4 SIZES.

CAPACITIES, 150 TO 800 BUSHEL PER HOUR.

CEDAR RAPIDS, IA., Dec. 19, 1890.

GENTS:—The No. 8 EXCELSIOR OAT CLIPPER, SEPARATOR, GRADER, AND POLISHER COMBINED, bought of you in January, 1890, is still doing business at the old stand and giving as good satisfaction as ever. We are now using it to polish barley and is giving good satisfaction.

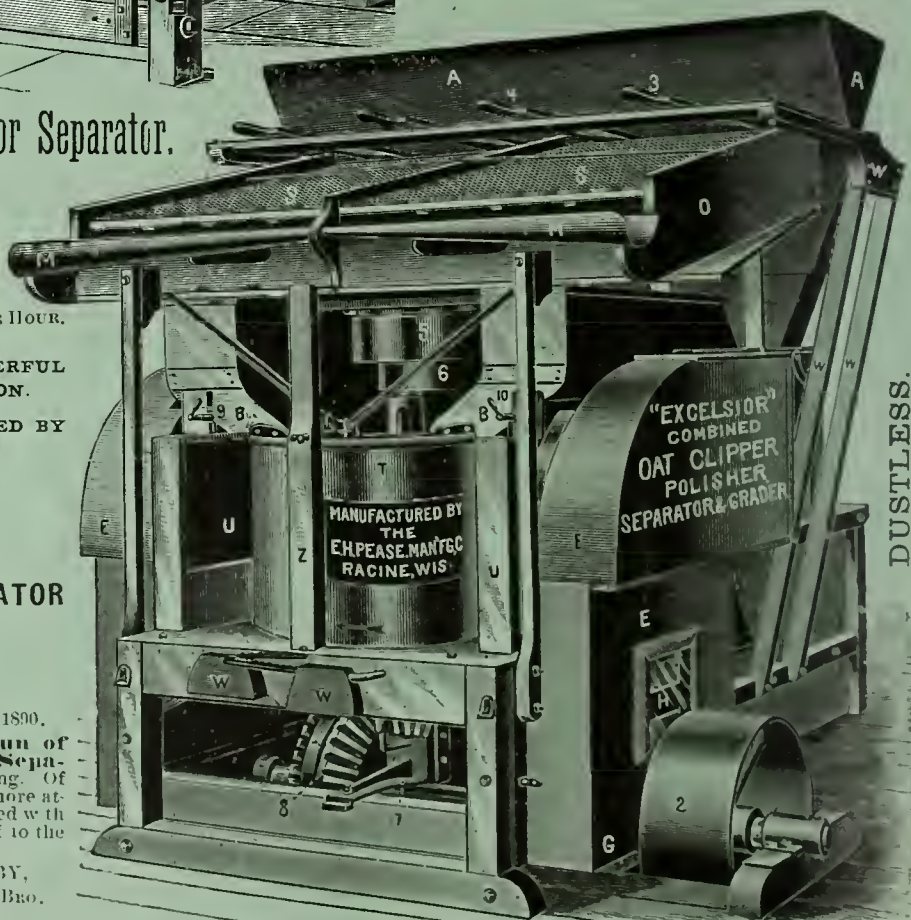
Yours truly,
MINER & MORGAN.



"EXCELSIOR JR." OAT CLIPPER, POLISHER and SEPARATOR
FOR CLIPPING, POLISHING, SEPARATING AND
CLEANING OATS,

OR MAY BE FURNISHED WITH SIEVING, ETC.,
FOR POLISHING, CLEANING, SEPARATING AND
GRADING WHEAT OR BARLEY.

MADE IN 2 SIZES. CAPACITIES, 250 TO 600 BUSHEL PER HOUR.



"EXCELSIOR" OAT CLIPPER, SEPARATOR AND GRADER COMBINED;
ALSO POLISHER, SEPARATOR AND GRADER COMBINED.

THIS "COMBINED" MACHINE May be fitted to fill any or all the capacities of a GENERAL DUST-
LESS ELEVATOR RECEIVING SEPARATOR for all kinds of Grain;
OR AS A CLIPPER, CLEANER, POLISHER, SEPARATOR and GRADER OF OATS.
OR AS A POLISHER, SEPARATOR, CLEANER and GRADER of Wheat and Barley.
MADE IN 3 SIZES, WITH CAPACITIES FROM 150 TO 750 BUSHEL PER HOUR.

SEND FOR
CATALOGUE
AND
PRICES
—TO—

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

SEE PAGES 65, 66 and 67.

SPECIAL FLAX CLEANING MACHINERY.

WE ARE MAKERS AND JOBBERS

OF ALL KINDS OF

MACHINERY and SUPPLIES

— FOR —

**GRAIN ELEVATORS,
MILLS,
MALT HOUSES,
BREWERIES,
AND DISTILLERIES,**

SUCH AS

SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,
GEARS, SPROCKETS, SET COLLARS,
TAKE-UP BOXES, CRANE-SPOUTS,
LEATHER, RUBBER, COTTON AND LINK BELTING.
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS.
ELEVATOR BOOTS, BUCKETS AND BOLTS.
"SPIRAL" AND "BELT" CONVEYORS.
"PLATFORM," "DUMP" AND "HOPPER" SCALES.
GRAIN SCOOPS, AND POWER GRAIN SHOVELS,
— ALL SIZES OF —

FARM AND WAREHOUSE FANNING MILLS.

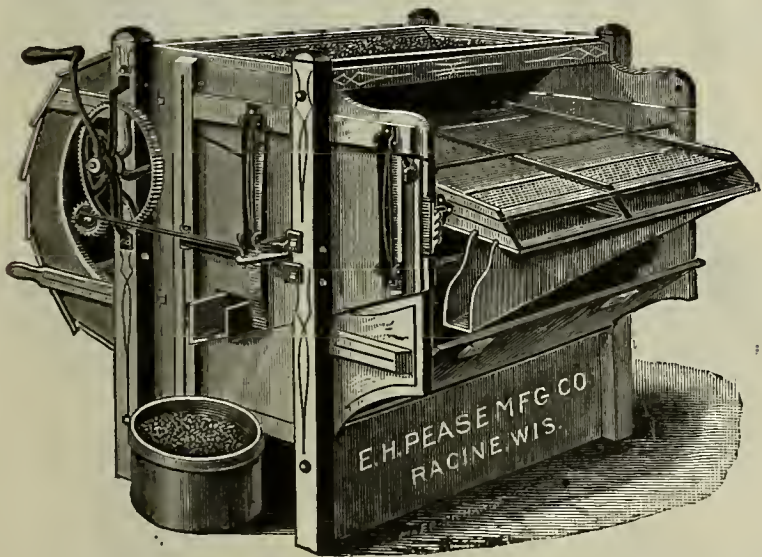
GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH.

Power Car Pullers, Oat Clippers, Dustless Receiving Separators,

POLISHERS, SEPARATORS, GRADERS,
FLAX REELS AND SPECIAL FLAX MILLS,
"OVERHEAD," "SWEEP" AND "TREAD" HORSE POWERS.
BAG-TRUCKS, SIX-WHEEL WAREHOUSE TRUCKS.

— AND —

PEASE SPECIAL FLAX MILLS



FOR HAND USE OR POWER.

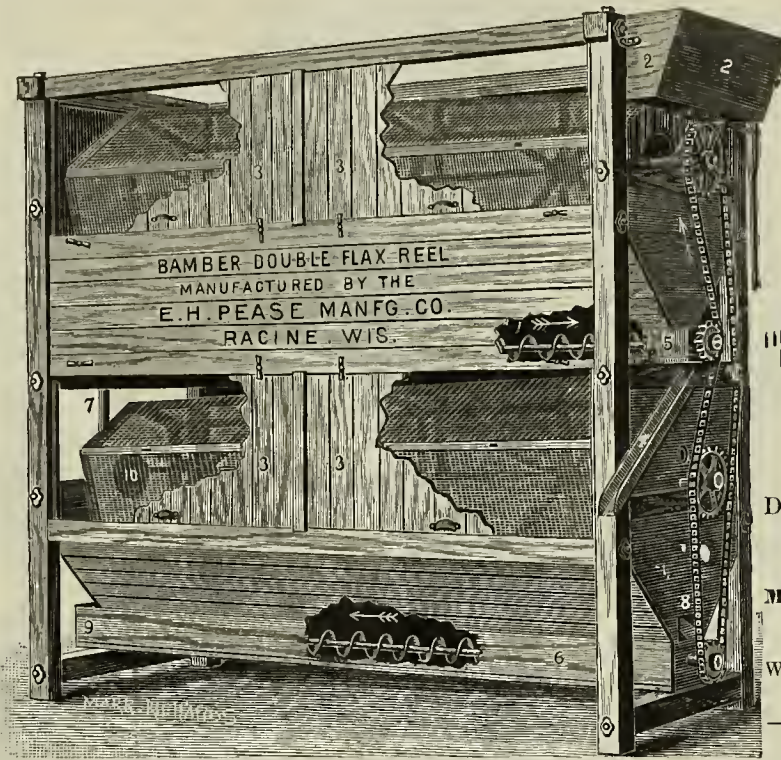
This Mill is represented with a Grain Hurdle in the Shoe, to show that although especially adapted to Flaxseed Cleaning, it can also be used for all kinds of Grain, making it a universal mill, calculated for all kinds of work. This mill is built upon the same principle as our Side Shake Warehouse Mills, but with more depth of the shoe, in order to accommodate deeper Sieves and a flax screen extending to the extreme front of the mill, a length of four feet. It consequently has greater capacity than any ordinary mill in existence. No flax hurdles are used, as separate sieves work better on flaxseed, and afford opportunities for changing the combinations for different classes of work. This mill is equally well adapted to cleaning, separating and screening Timothy, Clover, and other fine seeds.

NOTE—The No. 0 and No. 00 machines are not fitted to run by hand power.

	No. 2.	No. 1.	No. 0.	No. 00.
Extreme Height.	3 ft. 8 in.	3 ft. 8 in.	3 ft. 8 in.	3 ft. 8 in.
Size over all.....	5 ft. 7 in. x 4 ft.	5 ft. 7 in. x 4 ft.	5 ft. 7 in. x 5 ft.	5 ft. 7 in. x 6 ft.
		9 in.	9 in.	9 in.
Flt. cen. of pulley	27 in.	27 in.	27 in.	27 in.
Driving pulleys..	6 in. x 2 in.	6 in. x 2 in.	6 in. x 3 in.	6 in. x 3 in.
Rev. per minute.	275	275	275	275
Size of Sieves...	3 ft. 2 in. x 33 in.	4 ft. x 33 in.	5 ft. x 33 in.	6 ft. x 33 in.
Depth of Screw..	4 ft.	4 ft.	4 ft.	4 ft.
Capacity per h'r.	25 to 35 bu.	35 to 45 bu.	45 to 60 bu.	60 to 75 bu.

IN USE BY ALL THE
PRINCIPAL FLAX HANDLERS
OF THE UNITED STATES.

STRAIGHT OR TAPERED
HAND REELS OF ANY DIMENSIONS
DESIRED, MADE TO ORDER.



MADE
WITH
ONE,
TWO or
FOUR
REELS
IN A
CHEST
AND
with or without
"SCALPING-SHOE"
REELS
OF ANY
DESIRED STYLE
OR
DIMENSIONS
MADE TO ORDER
WRITE FOR
PARTICULARS.

Two feet of capacity length for each lineal foot of machine.

Tapered, Hexagon Reels, Revolving on Horizontal Shafts.

All Sprocket Wheels and Drive Chain run perpendicular and Parallel with each other.

The lightest running, best made, most durable reels in the market.

THESE REELING MACHINES

ARE ADOPTED AND IN USE BY SUCH

WELL-KNOWN HOUSES

— AS —

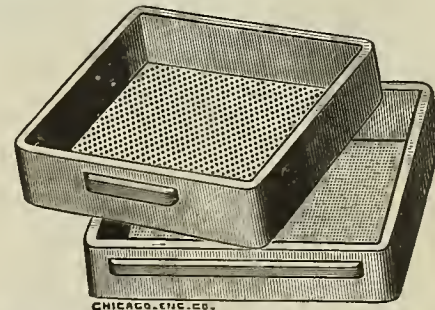
The Albert Dickinson Seed Co., Chicago.
The Minnesota Elevator Co., Chicago.
W. L. Luce, South Elmhurst (Chicago), Ill., and Minneapolis, Minn.
Cargill Bros., La Crosse, Wis.
McMichael & Son, McGregor, Iowa.
Winona Mill Co., Winona and Mankato, Minn.
Inter-State Grain Co., Minneapolis, Minn., and Olwein, Iowa.
Samuelson & Co., Stromsburg, Neb.
Stokes Bros., Watertown, So. Dakota.
Ness & Moen, Peterson, Minn.
J. C. Sanborn & Son, Ortonville, Minn.
D. C. Fairbanks, Dodge Center, Minn.
Clark Bros., Manson, Iowa.
Boor & Benjamin, Ashton, Iowa.
S. J. Clausen, Clear Lake, Iowa.
I. N. Drake, Hartley, Iowa.
AND MANY OTHERS.

SEND FOR CATALOGUE.

ADDRESS ALL LETTERS

CAREFULLY

—TO—



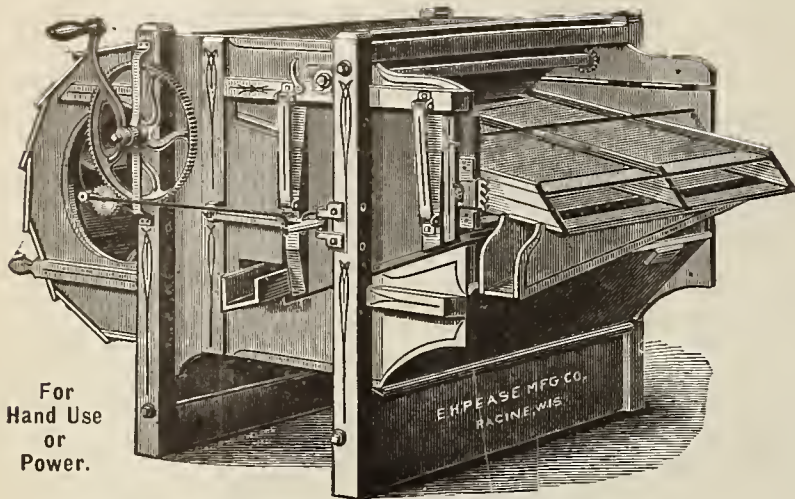
GRAIN AND SEED TESTER.

The upper box fits into the lower one. The zinc or wire cloth, as the case may be, are of different perforations, or meshes, according to the work required to do. When ordering, simply state what the Testers are to be used for, whether for grain or for fine seeds, and what kind, as separate Testers are required for each. A Tester includes a pair (both sieves).

E. H. PEASE MFG. CO., RACINE, WIS., U. S. A.

SEE PAGES 66, 67 AND SECOND COVER PAGE.

PEASE WAREHOUSE FANNING MILLS.



For
Hand Use
or
Power.

The "Pease" Side Shake Mills.

The Cut shows the "Right," or Crank side. On the opposite side are tight and loose Pulleys. These mills are not only a first-class mill for general work but are also specially adapted for all kinds of seed cleaning as is attested by the following unsolicited letter, which we publish by permission:

St. Charles, Minn., April 12, 1890.

E. H. PEASE MFG. CO., Racine, Wis.:

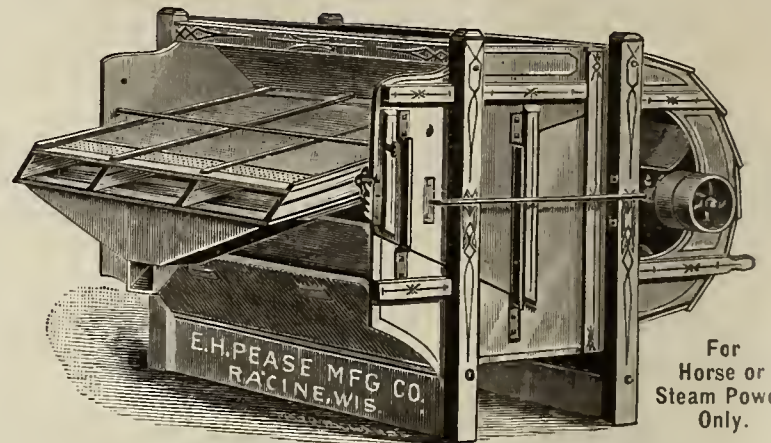
Gentlemen:—We have started the No. 2 Mill which we bought from you a short time ago. We find it to be the best Timothy Cleaner we ever saw. It cleans very fast and does fine work. It is far ahead of the mill for cleaning timothy. We also use a mill but it does not come up with the No. 2 side shake we bought of you. Your No. 2 will clean timothy about three times as fast as the mill does and does better work than the mill does. Your mill is well built and strong. We would not give our No. 2 "Pease" Side Shake for any two that we ever saw.

Very truly,
J. B. ZECHES & CO.

NOTE—The No. 0 machine is not fitted to run by hand power.

	No. 3.	No. 2.	No. 1.	No. 0.
Extreme Height.....	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.
Size over all.....	5 ft 2 in x 3 ft 4 in	5 ft. 2 in. x 4 ft.	5 ft 2 in x 4 ft 9 in	5 ft 2 in x 5 ft 9 in
Floor to center of pulley.....	25½ in.	25½ in.	25½ in.	25½ in.
Driving pulley.....	6 in. x 2 in.	6 in. x 2 in.	6 in. x 2 in.	6 in. x 3 in.
Revolutions per minute.....	275	275	275	275
Size of hurdles.....	2 ft. 6 in. x 24 in.	3 ft. 2 in. x 24 in.	4 ft. x 24 in.	5 ft. x 24 in.
Capacity per hour.....	100 to 200 bu.	125 to 200 bu.	175 to 350 bu.	250 to 450 bu.

HAVE
THE
LARGEST
SALES
OF
ANY
MADE
IN
THE
UNITED
STATES



For
Horse or
Steam Power.
Only.

The "Pease" End Shake Mills.

Particularly adapted for use in Horse Power Elevators where power is limited and close cleaning and grading desired. It is strong, durable and noiseless.

The shoe is supported by STEEL springs, hung from above and vibrated by flexible shake-rods with ADJUSTABLE ECCENTRICS. The shake is from front to back, instead of from side to side.

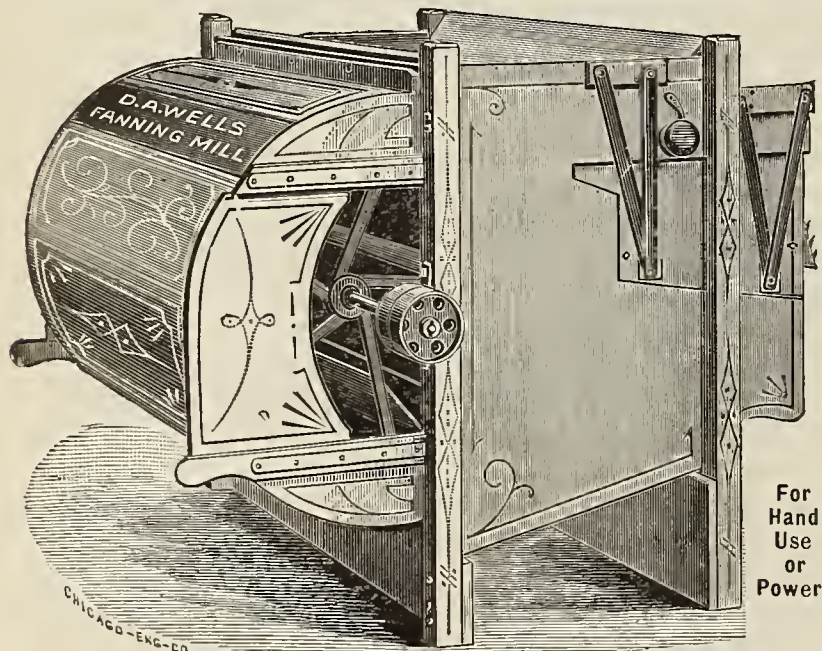
They are fitted with a patent adjustable hopper raiser, not shown in cut, which gives an even flow of grain upon the sieves.

These Mills have MUCH GREATER CAPACITY than any other kind of equal sizes. They are especially adapted for cleaning ALL KINDS OF GRAIN. The side shake Mills are better adapted for cleaning Clover, Timothy, Flax, etc.

NOTE—The pulleys are placed on the RIGHT side of mills or opposite to those showing in this cut, unless otherwise ordered.

	No. 3.	No. 2.	No. 1.	No. 0.	No. 00.
Extreme Height.....	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.	3 ft. 6 in.
Size over all.....	5 ft. 9 in. x 5 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.	5 ft. 9 in. x 5 ft. 9 in.
Floor to center of pulley.....	3 ft. 3 in.	3 ft. 11 in.	4 ft. 8 in.	5 ft. 8 in.	6 ft. 8 in.
Driving pulleys.....	25½ in.	25½ in.	25½ in.	25½ in.	25½ in.
Revolutions per minute.....	450	450	450	450	450
Size of hurdle.....	2 ft. 6 in. x 30 in.	3 ft. 2 in. x 30 in.	4 ft. x 30 in.	5 ft. x 30 in.	6 ft. x 30 in.
Capacity per hour.....	125 to 250 bu	150 to 300 bu	200 to 400 bu	250 to 500 bu	300 to 600 bu

THESE MACHINES CAN BE FURNISHED WITH SPECIAL SIEVING TO HANDLE ANY KIND OF GRAIN OR SEEDS.



For
Hand Use
or
Power.

The "D. A. Wells" Warehouse Fanning Mill.

Designed for locations where power is limited and rapid cleaning is more of an object than close grading.

They have a much larger capacity than our "Pease" Warehouse Mills, but having a larger fan, do not require as high a motion and consequently require less power.

These mills are famous as corn and oat cleaners, where plain elevator work is required, and to be done rapidly.

The sieves are so arranged that they may be put in place or taken out independently, thus enabling the operator to quickly arrange any combination that may be required for the various kinds or conditions of grain to be cleaned.

Extreme height.	Size over all.	Floor to center of pulley.	Driving pulleys.	Rev. per minute.	Size of sieves.	Capacity per hour on corn or oats.	Weight.
4 ft. 1 in.	5 ft 6 in x 2 ft. 3 in. 6 ft.	6 in x 2 in	140	57 in. x 26 in.	800 to 1,000 bu	425 lbs.	

Office of
WM. DEACON.

GRAIN AND SEEDS,
SANDWICH, ILL., May 23, 1890.

E. H. PEASE MFG. CO., Racine, Wis.:

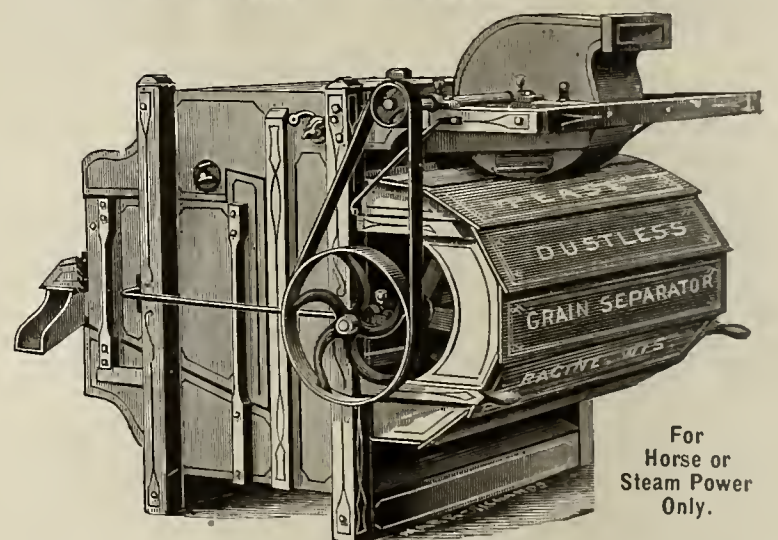
Gentlemen:—Replying to yours of recent date in which you inquire whether my old "D. W. Wells" Fanning Mill is not about worn out and if I will not require another one this season, would say:—The small piece of casting I ordered from you a few days ago to repair same, has put my mill in perfect order, with no reason in sight why it will not be running at the end of time and doing perfect work. This machine was in the Elevator when I took possession THREE years ago, and I am reliably informed has been in almost constant use here for FIFTEEN years previous to that time.

Very truly yours,
WM. DEACON.

WE
ARE
HEADQUARTERS
FOR
ALL KINDS OF
MOTIVE POWER
MACHINERY,
FITTINGS,
SUPPLIES AND
REPAIRS
FOR
GRAIN
ELEVATORS
AND
MILLS.

—O—
SEND FOR
GENERAL
CATALOGUE
AND PRICES
—TO—

The "Pease" Dustless Separators.



For
Horse or
Steam Power
Only.

CHICAGO, ILL., April 8, 1891.

GENTLEMEN:—The "Pease" Dustless Separator I bought of you March 26, 1891, I sold to Wittman & Co., 66 and 68 N. Halsted St. The No. 00 Machine I bought of you January 19, 1891, I sold to F. Grimsell, 80 W. Erie St., and one I bought of you some time ago I sold to Keifer Bros., North Ave. and Halsted St. These and several others of these "Pease" Dustless Separators I have bought of you are being used chiefly for cleaning corn and oats, and any of them will clean as fast as 8x3-inch buckets, placed 12 inches apart and running at the usual speed, can elevate.

All the machines are giving good satisfaction.

Yours, etc.,

R. D. HILDRETH, Millwright,
53 and 55 So. Jefferson St

SPIRIT LAKE, IOWA, May 7, 1891.

GENTLEMEN:—Inclosed find draft to pay for the No. 00 "Pease" Dustless Separator just received from you to take the place of the Separator. Day before yesterday we put the mill in place and have been running it on some odd jobs, and the Separator works to our entire satisfaction. The Dustless Fan and Conductor works splendidly, carrying out everything I want it to, and I can put the section on strong enough to take out grain if I desired. I can regulate the machine just as I want to, and am just more than pleased with it.

Yours truly,
D. L. RILEY.

	No. 3.	No. 2.	No. 1.	No. 0.	No. 00.
Extreme height.....	5 ft. 2 in.	5 ft. 2 in.	5 ft. 2 in.	5 ft. 3 in.	5 ft. 3 in.
Size over all.....	5 ft 9 in x 3 ft 10 in.	5 ft 9 in x 4 ft 6 in.	5 ft 9 in x 5 ft 3 in.	5 ft 9 in x 6 ft 3 in.	5 ft 9 in x 7 ft 3 in.
Height to where grain enters.....	4 ft. 3 in.	4 ft. 3 in.	4 ft. 3 in.	4 ft. 3 in.	4 ft. 3 in.
Floor to center of pulley.....	2 ft. 3 in.	2 ft. 3 in.	2 ft. 3 in.	2 ft. 3 in.	2 ft. 3 in.
Driving pulleys.....	6 in. x 3 in.	6 in. x 3 in.	6 in. x 3 in.	6 in. x 4 in.	6 in. x 4 in.
Rev. per minute.....	450	450	450	450	450
Size of hurdles.....	2 ft. 6 in. x 30 in.	3 ft. 2 in. x 30 in.	4 ft. x 30 in.	5 ft. x 30 in.	6 ft. x 30 in.
Capacity per hour.....	125 to 250 bu	150 to 300 bu	200 to 400 bu	250 to 400 bu	300 to 600 bu

E. H. PEASE MFG. CO., RACINE, WIS., U.S.A.

SEE PAGES 65, 67 AND SECOND COVER PAGE.

WE ARE HEADQUARTERS

For ALL kinds of MACHINERY AND SUPPLIES

—FOR—
Grain Elevators and Mills,

SUCH AS
SHAFTING, PULLEYS, HANGERS,
PILLOW-BLOCKS, CLUTCHES, COUPLINGS,
GEARS, SPROCKETS, SET COLLARS,
TAKE-UP BOXES, CRANE-SPOUTS,
LEATHER, RUBBER, COTTON AND LINK BELTING,
"FLEXIBLE" AND "SWIVEL" GRAIN SPOUTS,
ELEVATOR BOOTS, BUCKETS AND BOLTS,
"SPIRAL" AND "BELT" CONVEYORS,
"PLATFORM," "DUMP" AND "HOPPER" SCALES,
GRAIN SCOOPS AND POWER GRAIN SHOVELS.

—ALL SIZES OF—

Farm and Warehouse Fanning Mills,
GRAIN TESTERS, SEED TESTERS,
PERFORATED METALS, WIRE CLOTH,
Power Car Pullers, Oat Clippers, Dustless
Receiving Separators.

POLISHERS, SEPARATORS, GRADERS,
CORN SHELLERS, STEAM ENGINES, FLAX REELS
AND SPECIAL FLAX MILLS, "OVERHEAD,"
"SWEEP" AND "TREAD" HORSE POWERS,
BAG-TRUCKS, SIX-WHEEL WAREHOUSE TRUCKS, ETC.

SOLE AGENTS FOR
Illinois, Wisconsin, Iowa, Minnesota,
N. & S. Dakota, Nebraska and Kansas.

—E. H. PEASE MFG. CO. RACINE, WIS.

—E. H. PEASE MFG. CO. RACINE, WIS.

—E. H. PEASE MFG. CO. RACINE, WIS.

HERCULES
STEEL SCOOP
PAT. D. SEPT. 28th 1891.

SIX-WHEEL STORE & WARE-HOUSE CARTS

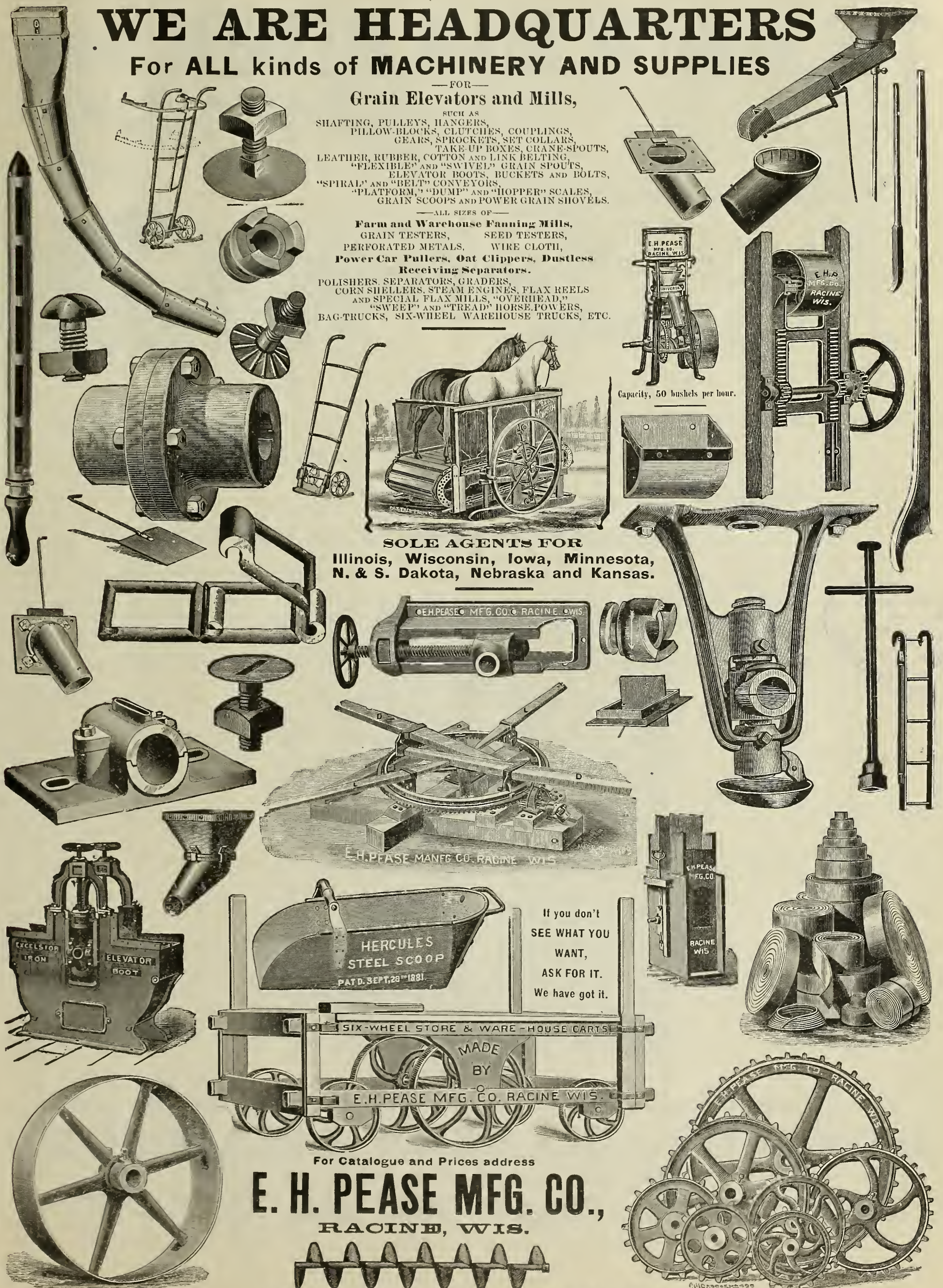
MADE
BY

—E. H. PEASE MFG. CO. RACINE, WIS.

For Catalogue and Prices address

E. H. PEASE MFG. CO.,
RACINE, WIS.

SEE PAGES 65, 66 AND SECOND COVER PAGE.



THE MONITOR GRAIN CLEANERS

The Superiority of these Machines over all others is best demonstrated by the evidence of those who are using them.

✦ ✦ ✦

THE MIDLAND ELEVATOR CO.



Dictated.

Kansas City, Mo., Feb. 10, 1891.

Messrs. Huntley, Cranson & Hammond,

Silver Creek, N.Y.

Gentlemen,-

Your Separators, which during the past summer you put into our million and half million elevators at this point, are giving excellent satisfaction, and our superintendent, who has had long experience in the elevator business, states to us that they are the best Separators he has ever operated.

We have four No.8 Warehouse Separators in the Union Pacific Elevator, and six No.8 Separators in the Santa Fe Elevator.

We simply add to this, as a recommendation, that when we are in need of more, we shall not look further than your Company.

Yours truly,

The Midland Elevator Co.

Chas. J. Rorty

Pres.

A complete line of these machines can be seen and full information obtained at our Western Branch, 63 and 65 South Canal Street, Chicago, Ill.

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PHILADELPHIA'S CHIEF GRAIN INSPECTOR.

Captain John Oppell Foering, the present chief inspector of grain at Philadelphia, Pa., of whom we herewith give a cut, was born in Philadelphia. After a public school education, having reached the highest class in the grammar school at the age of 10 and remaining there for two years, he concluded to leave school and enter mercantile pursuits. In 1855 he entered the employ of James Halsey & Moore, wholesale dealers in cloths and tailors' trimmings, and remained with them until the firm was carried down in the panic of 1857, when he entered the employ of Geo. W. Reed & Co., wholesale clothiers, remaining with them, occupying various positions of trust and responsibility, until Fort Sumter was fired upon, when, within several months of his eighteenth birthday, he enlisted in the "Artillery Corps, Washington Grays," one of the leading militia companies of Philadelphia, in the defense of his country. He entered zealously into acquiring military knowledge, and drilled regularly with the company until the day of muster, when partly on account of his age but mainly through the intercession of his father, he was set aside by the mustering officer (Colonel Ruff).

The boy was not to be set aside so easily, but walked around the corner and enlisted in the Second company, Independent Grays, drilling with the company daily until it was accepted by Colonel John W. Geary as Company D of the well-known fighting and marching regiment, the Twenty eighth Pennsylvania Veteran Volunteers. He was mustered in the service in June, 1861, as corporal, and served with his command throughout the entire war, never missing a march or an engagement, and was never absent during the war. He served in the Armies of the Potomac and the Cumberland; was wounded in the neck in July, 1864, near Kenesaw Mountain, Georgia, and was struck in the left breast while charging the enemy's works at Pine Knot, Ga., in June, 1864, the bullet striking his watch and destroying it; but it saved his life. He was promoted several times, being made first lieutenant and commanding his company in the Atlanta campaign before his twenty-first birthday. On the recommendation of his division commander, Major-General John W. Geary, he was breveted a captain of United States Volunteers for gallant and meritorious services in numerous engagements, including Cedar Mountain, Chancellorsville, Gettysburg, Lookout Mountain, the Atlanta campaign, and the marches through

Georgia and the Carolinas to the close of the war. After his muster out of the service he immediately returned to mercantile life, although highly recommended for a position in the regular army. By special request he reentered the employ of Geo. W. Reed & Co., with whom he remained until December, 1867, when the board of directors of the Philadelphia Grain Warehousing and Drying Company, lessees of the Washington street elevator, Philadelphia, secured his services as their superin-

Inspection of grain by regularly appointed inspectors was unknown at the time he assumed charge of the elevator. All grain was stored either by the classification of private inspectors or by the elevator superintendent (mostly by the latter), and this gave him considerable schooling as to the various kinds and qualities of grain, and also as to its general keeping qualities. He was very ably assisted in this work by his late weighmaster, Mr. Joseph B. Green, who had twenty or more years' experience in the grain business. In over nine years not a single claim was ever made on the elevator company for errors in storing the grain intrusted to their keeping.

At the time of inaugurating the inspection system, and several times afterward, the Commercial Exchange, through its committee, offered Mr. Foering the position of chief inspector, but it was not until he severed his connection with his company at the expiration of their lease of the elevator that he consented to accept the position. He was at the same time offered the management of the elevator by the Pennsylvania Railroad Company. On his entering upon his duties of chief inspector many reforms were inaugurated in the system of grain inspection at that port, and his long experience as an elevator manager has been of great assistance to him in the discharge of his duties. He is always on the alert to adopt new ideas and improve on all he sees and hears in regard to the handling and inspection of grain. It has been his custom for years to make frequent visits to the various grain receiving and shipping centers of the United States, and familiarize himself with the various grades of grain; and it has been of great benefit not only to himself but to the Western shipper and the receivers in his own market, who have benefited by the experience he has imparted to them.



JOHN O. FOERING, PHILADELPHIA'S CHIEF GRAIN INSPECTOR.

tendent. This was the first export grain elevator built in the city, and upon Mr. Foering devolved the entire management of the business, so far as the handling and storing of the grain and the keeping of the accounts were concerned. The duties were entirely new to him, but he applied himself zealously to the work and strove hard for success. It was not long before he made a record for himself for the correctness of his weights, both inward and outward; complaints from the Western shippers were few, and general satisfaction was the verdict as to the out turns of the weights of the cargoes delivered abroad.

A SERIES of important experiments in reference to the yield of the different varieties of wheat has been completed at the Agricultural Experimental Station of Missouri. Sixty-three varieties were planted and the yields, which were carefully computed, give the early Oakley first place with a yield of 42.5 bushels to the acre, while the German Emperor brought up the rear with 22 bushels. The Oakley, however, has been found to yield well only under favorable conditions, suffering greatly in hard winters. The Fultz variety, the wheat most in use in Missouri, was pronounced the best. Its yield is not so great as some other varieties, being 32 bushels, but it is remarkably hard and the straw is stiff, but 5 per cent. being down, while with the Oakley 90 per cent. was down.

GRAIN INSPECTION AT PHILADELPHIA.

The department for the inspection of grain in Philadelphia was established by the Commercial Exchange of Philadelphia in 1876. Previous to that time all grain arriving was sold by sample, and the purchaser ordered it to the elevators to be stored as he might direct, with other grain of like kind or quality of his personal ownership. Some firms had their private inspectors or samplers, while a number relied upon the judgment of the elevator superintendents in the storing of their grain. Cars were held on track until this private inspection was made, necessarily causing much delay in the unloading of the cars, serious complaints from the railroad companies, and frequently creating blockades of cars at the railroad terminals. Up to this date there were only two export elevators located in Philadelphia; one at Washington avenue wharf of about 450,000 bushels' capacity, leased by the Philadelphia Grain Warehousing and Drying Company from the Pennsylvania Railroad Company, and the other at Girard Point, at the mouth of the Schuylkill River, of about 700,000 bushels' capacity, owned and operated by the International Navigation Company. Both were at the terminals of the Pennsylvania Railroad Company. As the system of private inspection and individual storage lessened the storage capacities of these elevators to such an extent as to cause great inconvenience to the railroad companies in the prompt handling of its cars, measures were taken by the grain trade to establish a system of inspection to be under the supervision and control of the grain committee of the Commercial Exchange of Philadelphia. To this end the subject was brought to the attention of the board of directors on Feb. 11, 1876, and the grain committee adopted the necessary rules and regulations, and appointed inspectors to inspect and grade all grain arriving at the export elevators. The inspection went into effect April 15, 1876. Later on the inspection was applied to all local grain, and at this time all grain arriving in Philadelphia (except grain in transit on through bills of lading) is inspected on its arrival.

The present grain rules of the Exchange cover in a general way the following important points:

Rule 1 requires that at the first meeting of the board of directors of the Exchange after their election, the president shall appoint, subject to the approval of the board, a committee on grain, consisting of seven (7) members of the Commercial Exchange, who are known as members of the grain trade. (This committee represents the several branches of the trade—receivers, exporters and local dealers in car lots.) This committee shall also act as an arbitration committee to consider and decide all disputes arising from transactions in grain which may be submitted to it by members of the trade.

Rule 2 provides that the committee on grain shall, as early as practicable each year, establish grades of grain, etc., and they shall submit to the trade for adoption such regulations as it may from time to time consider necessary, but they can make no change in established regulations or in the grades of grain, except at a meeting of the trade, in accordance with the rules provided for in the by-laws.

Rule 3 "provides that the committee on grain shall recommend to the board of directors for election as chief inspector of grain, the applicant whom they may consider best qualified to properly discharge the duties of the office; and for deputy inspector such persons as are nominated by the chief inspector and are satisfactory to the committee. The chief inspector and his deputies are subject to the general orders of the committee on grain, and are also required to exercise personal supervision of all graded grain stored in the regular elevators and warehouses." All the inspectors are sworn officers, and the chief inspector is under bonds to the Exchange for himself and deputies for the faithful performance of his and their duties, and the payment of all just claims growing out of the inspection of grain awarded against him to any member of the Exchange.

All grain on track or afloat, received at recognized railroad terminals or convenient locations for such purpose, shall be inspected, and the inspector shall have free access to all grain to be inspected and be satisfied that it is properly stored according to grade. All grain delivered to vessels or cars from regular elevators shall be officially re-inspected out at time of loading unless otherwise ordered, and the chief inspector is required to report to the committee on grain in writing, all attempts to defraud the established system of inspecting and storing grain, or to

deliver grain of a lower grade than that called for by the warehouse receipt.

All appeals growing out of the inspection must be referred to the committee on grain for final adjudication.

The department is conducted under the fee system, the chief receiving all the fees and paying all the expenses of his department. The Exchange is not interested in any way in the financial management of the department, which has been operated in the same manner since its organization.

The grain committee is at the present time composed of the following members of the Exchange:

Samuel C. Woolman, chairman (has held this position for the past ten years, having been re-elected each year by the several committees); Edward W. Barker of Gill & Fisher, Limited; Frank L. Neall of Peter Wright & Sons; George H. Rogers of Geo. E. Bartol Company, Limited; George M. Warner of Hancock & Co.; Samuel J. Clevenger of S. J. Clevenger & Co.; Charles J. String of String, Brazer & Co.

The present inspection force consists of one (1) chief, four (4) deputy inspectors and ten (10) helpers, samplers and clerks.

The chief inspector is Mr. John O. Foering, who has held this position since April 1, 1877, nearly fourteen and one-half years, continuously, having been unanimously re-elected each year.

The senior deputy inspector, Mr. Philip Vert, has had some thirty years' experience in the handling of grain. For a number of years he was with William B. Thomas, miller and grain elevator lessee, also as weigher for the International Navigation Company's elevator at Girard Point, and under Mr. Foering as deputy inspector for the past fourteen years. Deputies Harmon V. Bishop, Abram P. Foering and William J. Duffy, have been in Mr. Foering's employ almost from the start, and have occupied various positions, thoroughly familiarizing themselves with all the detail work in the department, and have been deputies for several years, so that the department is working as one man.

All grain, upon its arrival in Philadelphia, intended for export is ordered to the export elevators, and that intended for the local trade is ordered to the local elevators or recognized local track delivery points, where each and every car is promptly inspected by an official of the grain inspection department. At each of the export elevators there is a deputy inspector stationed with a suitable number of assistants to expeditiously inspect all cars of grain as they arrive. The same method of inspection is pursued, by the use of the grain tryer, etc., as is the custom at Chicago and other large grain inspection points. Each car as soon as inspected has a card tacked on the door on which is marked the number and initial of the car, grade of the grain, date of inspection, and any note of leakage caused by improper boarding for inside doors, damage by bad roofs, etc., and the same is entered in the track inspection book. This ticket is taken off the car by the foreman of the elevator and is preserved by him as his authority for storing the grain, etc.

The utmost care is exercised by the deputies in the inspection. They are all men of long experience in the business, have had the most careful training, and never act hastily in pronouncing their judgment on their work. When in doubt, and not wishing to do an injustice to the shipper of the grain, they will carefully sample the contents of the car and hold the car on track for the views of their chief before giving the grade, striving at all times to do full justice to the grain.

Frequently cars of grain for want of proper cleaning at the point of shipment would be relegated to a lower grade, but by the wise instructions given to the chief inspector by the grain committee to order blown all grain that in his judgment would be entitled to the higher grade if properly cleaned. This greatly benefits this market, as it gives the Western shipper, with a very trifling loss in weight, a grade of No. 2 for his wheat, corn or oats, that would otherwise not grade better than No. 3. This has been the means of drawing large quantities of grain to Philadelphia that would have netted a considerable loss to the shipper if shipped elsewhere.

The deputy inspectors at the export elevators have charge of all the deliveries of grain, and under their supervision all the grain for export is inspected out. This is somewhat different from the system at Chicago, where the outward inspection comes under the care of a separate inspector, the track inspector there being at too remote a point to have supervision of the outward work. It is

claimed that by the system at Philadelphia, where the inspector has complete supervision over all the grain at his elevator, he can be more liberal with his inspection into store, deal fairly with the Western shipper, and at the same time give the foreign buyer good and uniform cargoes, equal in quality to the best of other export markets, as is proven by the reputation enjoyed by Philadelphia for the remarkable uniformity of its cargoes as received abroad.

As a safeguard to the shipper and for the information of the receiver of the grain that is sent to the export elevators, the deputy sends to the chief inspector's office daily samples of all cars that miss the contract grades, and these samples are delivered to the receiver, thus enabling the receiver to bear eye witness that his shipper has been fairly dealt with. The chief inspector makes it his duty to devote at least one-half of each day among his deputies reviewing their work on the inspection tracks, thus insuring uniformity of inspection at all the inspection points. He personally makes an examination of all cars that may miss grading, either in the ears or by reviewing the samples drawn by his deputy. Whenever, in his judgment, it is necessary to change the grade on a car improperly graded, it is at once ordered done without recourse to the grain committee, which is only called upon to act when an appeal is made to them from the decision of the chief inspector.

As an example of the satisfactory workings of the inspection department, it is enough to say that in nearly fourteen and one-half (14½) years since Mr. Foering has been chief there have been inspected on receipt in Philadelphia 514,842 cars, and on which there have been only 25 appeals, representing about 150 cars. The chief was sustained in his decisions on all but 4 appeals representing 11 cars, as follows: 1 car corn lowered from sail to steamer; 6 cars wheat (out of 14 appealed from) raised from rejected to No. 3 (these cars had been degraded on account of rye mixture); 2 cars corn (out of 4 appealed from) changed from mixed to yellow; 2 ears corn (out of 4 appealed from) raised from steamer to sail.

On outward inspections there were six appeals on cargoes representing less than 100,000 bushels out of a total outward inspection of export grain of 196,114,600 bushels, in all of which decisions the chief was sustained by the committees.

On grain received afloat there was one appeal on 2,000 bushels wheat out of total receipts of about 7,750,000 bushels. In this appeal the chief was also sustained.

The local inspection is conducted at the various local elevators and track delivery points in the same manner as at the export elevators, except that the cars are not ticketed. A written report, giving number of ears, grades, etc., is furnished the elevator companies. Each and every car is carefully sampled, the bag being marked with the number and initial of car, date of inspection, consignee's name, where inspected, and when unloaded in elevator the number of the bin is given. These samples are furnished the receiver on 'Change in time for the opening sales.

In addition to the information furnished to the elevator companies, there is furnished from the chief inspector's office to each receiver a memorandum giving a transcript of the inspector's books, of the car number, initial, grade, and all remarks pertaining to each car inspected for him, also stating place where inspected. This is furnished the receiver before the opening of 'Change and before he receives his warehouse receipts from the elevator companies, enabling him frequently to make sales at the opening of 'Change.

The inspection department has the hearty co-operation of the managers and superintendents of the several elevators in the handling and storing of the grain, everything moving smoothly and without jar.

PHILADELPHIA GRAIN ELEVATORS.

(Pennsylvania Railroad System.)

GIRARD POINT STORAGE COMPANY.

Elevator.	Location.	Storage Capacity, Bushels.	Receiving Capacity, Cars, Ten hours.	Delivering Capacity, Bushels, Ten hours.
A.....	Girard Point.	800,000	150	150,000
B.....	Girard Point.	1,200,000	300	250,000
C.....	Washington St.	400,000	100	130,000

Pennsylvania Railroad Co.'s grain depot; capacity, 300,000 bushels.

(Philadelphia and Reading Railroad System.)
PHILADELPHIA GRAIN ELEVATOR COMPANY.

Elevator.	Location.	Storage Capacity, Bushels.	Receiving Capacity, Cars, Ten hours.	Delivering Capacity, Bushels, Ten hours.
Pt. Richmond.	Pt. Richmond.	1,000,000	300	300,000
Twentieth St.	Twentieth St.	400,000	100	100,000

(Baltimore and Ohio Railroad System.)
TRADESMEN'S GRAIN ELEVATOR AND STORAGE COMPANY.

Elevator.	Location.	Storage Capacity, Bushels.	Receiving Capacity, Cars, Ten hours.	Delivering Capacity, Bushels, Ten hours.
Twenty-third.	Twenty-third & Race.	125,000

FLOATING ELEVATORS.

Elevator.	Proprietors.	Capacity per hour.
Columbia.	Girard Point Storage Company	4,000 bushels.
St. Nicholas.	Girard Point Storage Company	2,500 bushels.
Empire.	Phila. Floating Elevator Assn.	6,000 bushels.

AN ERA OF HIGHER PRICES.

Mr. S. W. Van Dusen of Minneapolis, the manager of the elevator syndicate, is a wide-awake observer of the conditions of the wheat market. He fully agrees with Mr. C. Wood Davis that this country has entered upon an era of permanently higher prices for all food products and especially for wheat; that we reached the limit of the equilibrium of production and consumption five years ago; that since then the increase of production has been in a far smaller ratio than the increase of population and consumption; that the increased acreage of wheat in the Western districts of the United States will only about offset the diminished wheat areas of the older states, and that in five years we will be importing wheat into this country. Other gentlemen engaged in the wheat or milling business expressed the same views, but did not care to be quoted. The concurrence of these actual dealers in wheat and flour on so large a scale as to render them practical experts in the statistics of the business with the position of Mr. Davis invests them with a startling significance. Even the speculators on the Boards of Trade can have no power to arrest for any length of time the tendency of prices to be governed by the ratio of actual supply and actual demand when the facts of the situation are universally known. Farmers will not sell wheat which they know is worth \$1.25 or \$1.50 a bushel for 60 or 70 cents, and, as we have already said, the most important service which can be rendered to the farmers of the country is to make them know just what the facts of the situation are.

We do not believe that any artificial manipulation of the price of wheat by short settlers will be possible when they can no longer work upon the fears of holders born of ignorance of the real facts of the matter.—*Pioneer Press.*

BOYCOTT AT FAIRPORT.

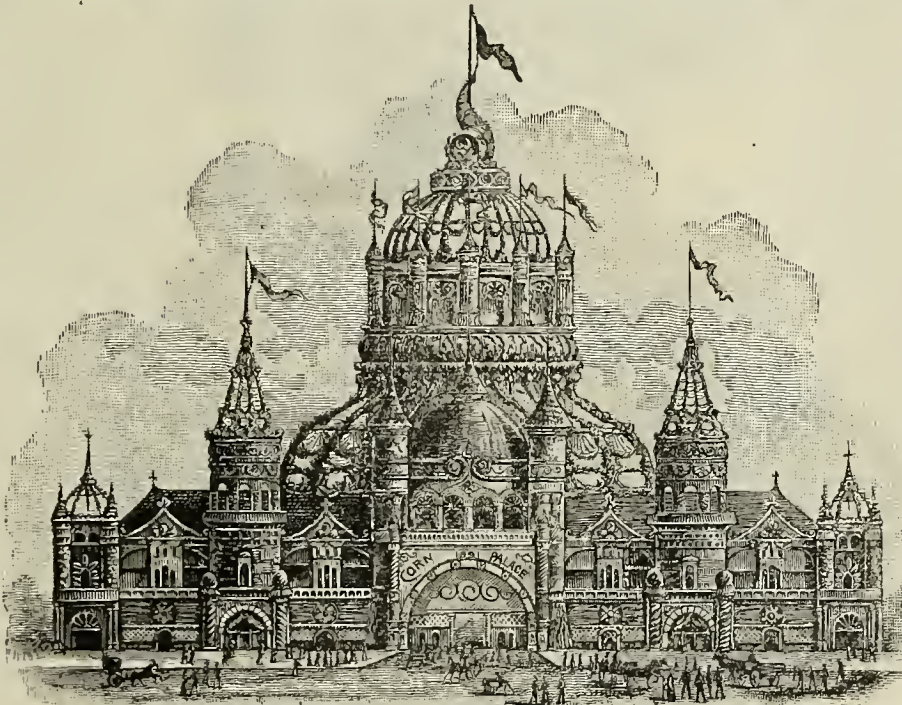
Last spring the Baltimore & Ohio erected a new elevator at Fairport, O., and started in with the intention of doing a big lake and rail business in grain. It had purchased during the winter the Pittsburg & Western, and Fairport was to be the Baltimore & Ohio what Erie is to the Pennsylvania Railroad. Business started in well enough, but it was not long before grain suddenly ceased to come into Fairport. An effectual boycott had been placed on that port by vesselmen in view of the heavy shortages their boats had experienced there. One big steamer, which had received \$300 outside of the cost of handling cargo, had a shortage amounting to nearly \$400, and other craft suffered as badly. For six weeks not a bushel of grain has been shipped to Fairport, notwithstanding the Baltimore & Ohio has announced its intention of increasing its elevator capacity from 1,000,000 to 1,500,000 bushels. It is doubtful if a premium of ½ cent a bushel over prevailing rates would tempt vesselmen to again run the risk of Fairport.

HOW TO PREVENT FROST DAMAGE IN WHEAT FIELDS.

If people knew how easily a summer frost can be guarded against there need be no uneasiness in regard to losing this magnificent crop by frost. When there is a sudden fall of temperature and danger of frost, smudges should be started and kept burning through the night. The smoke forms a cloud over the wheat, and prevents a frost. A smudge every few rods is not required. One good one in every section is sufficient to form absolute protection against frosts as heavy as we had in 1888. An old straw stack that smokes during the night, or a half a ton of dry straw covered with two or three loads of green grass or weeds, will make a smudge that will save the crops for a mile in every direction. The popular idea is that heat from fires started is required. Heat ascends too rapidly, and cannot be disseminated over large fields. If every tenth farmer would put out a good smudge and keep it burning during the night, it would save the entire crop.

CORN PALACE OF 1891.

The enterprising people of Sioux City, Ia., have erected four successive temples to Mondamin and a fifth Corn Palace is now being constructed on a larger and grander scale than ever before. The building, illustrated here with, will be 380x150 feet, and the center tower to rise 200 feet above the pavement. It will be thrown open to the



SIoux CITY CORN PALACE OF 1891.

world amid great pomp and splendor on the first day of October and remain open for seventeen days thereafter. A mammoth exhibit from Central and South America will be an attraction, besides the county displays from the states of Dakota, Nebraska, Minnesota and Iowa.

HAY.

We imported in June 7,665 tons of hay, valued at \$51,299, against 10,459 tons, valued at \$90,045 in June, 1890. During the nine months ending June 30, we imported 33,085 tons, valued at \$233,632, against 99,811 tons, valued at \$890,469, during the nine months ending June 30, 1890. This remarkable decrease is due to the increase in the duty last October from \$2 per ton to \$4. While the duty was doubled, the imports are less than one third of what they formerly were. For the twelve months ending with June we imported 50,242 tons, valued at \$445,461, against 124,544 tons, valued at \$1,143,445, for the corresponding period of 1889-90. Of the imported hay only 9 tons, valued at \$73, were reshipped to foreign countries in the twelve months ending with June, 1890, against 21 tons, valued at \$199, for the same period of 1889-90.

Our imported hay comes from Canada exclusively, and the reduction in imports falls heavily on that country, inasmuch as her market is confined to the United States and Great Britain.

The hay exports in June were 2,014 tons, valued at \$35,294, against 3,637 tons, valued at \$55,313, in June, 1890. In the twelve months ending with June we exported 28,066 tons, valued at \$470,228, against 36,274 tons, valued at \$567,558, and 21,928 tons, valued at

\$388,777, in the corresponding periods of 1889-90 and 1888-89 respectively.

According to the report of the Secretary of Agriculture the average yield per acre for ten years is 1.19 tons, the highest being 1.39 tons in California and Oregon, and the lowest .93 tons in Vermont. The average value per acre for ten years is \$11.08; the extremes being \$4.82 in Nebraska where large areas can be had for little more than the cost of cutting, and \$18.82 in Massachusetts where the production and yield are small and the consumption large. Although the yield in California is very good a good price is also obtained, \$16.02. The poor yield in New Hampshire is not compensated for by high prices, the value of one acre's product being only \$11.08. Good prices have been obtained in the South owing to limited production, grass being deemed inimical to agriculture under the cotton regime. Increased acreage may, however, be expected in the future.

The annual reports of the Department of Agriculture show that the total annual product in 1867 was 26,277,000 tons, home value \$372,864,670, with 20,020,554 acres under cultivation. The annual product declined from that year until 1871, when it was lower than in any succeeding year, the figures standing, 22,239,400 tons, valued at \$351,717,035, from 19,009,052 acres. Each succeeding year marked an increase until 1878, when the crop aggregated 39,608,296 tons, valued at \$285,543,752, from 26,931,300 acres. The crop of 1880 was 8,000,000 tons less, but it was worth \$88,000,000 more. A yearly increase followed up to 1884, when our largest crop was harvested, aggregating 48,470,460 tons, valued at \$396,139,309, from 38,571,593 acres. In 1885 the most extensive area was cultivated, producing 44,731,550 tons, valued at \$389,752,873. The crop of 1886 was 41,796,499 tons, valued at \$353,437,699, from 36,501,688 acres, and the next year 41,454,458 tons, valued at \$413,440,283 from 37,664,739 acres. Both product and acreage increased in 1888, being respectively 46,643,024 tons and 38,591,903 acres, and the value \$408,499,565. The most valuable crop was harvested in 1881, it aggregated 35,135,064 tons, valued at \$415,131,366, the produce of 30,888,700 acres.

In 1888 New York harvested 5,426,757 tons; Iowa, 5,272,783; Illinois, 4,625,482; Pennsylvania, 2,997,068; Ohio, 2,960,666; Wisconsin, 2,165,391, and Minnesota, 2,112,500 tons. The following states produced more than 1,000,000 tons: Kansas, Indiana, Missouri, Michigan, California, Nebraska, Maine and Vermont. The largest crop produced by any state previous to 1889 was that of New York, 6,480,000 tons, in 1878.

The receipts of hay at Chicago in 1890 were 170,562 tons, and the shipments 19,378 tons. Receipts at St. Louis in 1890 were 114,092 tons, and shipments 40,247 tons, against receipts, 116,346 tons, and shipments, 53,522 tons in 1889, when the city's trade was larger than in any previous year. Cincinnati's receipts and shipments for the twelve months ending with August, 1888, were respectively 66,888 tons and 24,938 tons, against 65,266 tons and 21,229 tons respectively, for the corresponding period of 1886-87. During 1890 Peoria, Ill., received 47,222 tons, and shipped 13,398 tons. The hay trade of Minneapolis in 1889 amounted to 25,710 tons received, and 1,067 tons shipped. Toronto, Ont., received by rail in 1889, 30,963 tons.

Receipts of rice at New Orleans during the twelve months ending with July were 892,374 sacks rough rice and 4,115 barrels clean rice. Each sack contained 175 pounds on an average, and each barrel 230 pounds.

C. E. Vandever at Walnut Valley, Kan., planted some corn June 1, which he had secured from the Navajo Indians in New Mexico. July 31 the corn was about ready for harvest. It is a semi flint variety, with white, long ears and shallow grain. Another kind is blue in color. The four ears planted gave a return of about ten bushels.

Secretary Rusk has instructed Colonel Murphy, corn commissioner of the government in Europe, to go to Berlin and make what arrangements he can to get American corn into the provinces that have hitherto depended on Russian rye. Colonel Murphy is well fitted for this task. He is an enthusiast concerning our maize, and has devoted a great deal of time to making its nutritious and healthful qualities known on the Continent.

FUMIGATORS FOR GRAIN BINS.

The fumigating of grain bins and grain storehouses infested with insects has become so common that an apparatus has been invented by Thaddeus A. Manahan of Young, Tex., especially for this purpose.

The part of the fumigator marked A in the illustration is provided with a small extension which projects into a pipe. The tube D fits over the pipe and contains a spark arrester and consisting of an inverted can having a perforated bottom. From this a perforated pipe extends into the bin. A bellows is attached to the bottom of the vessel A, and drives the fumes into the bin.

WILL NOT IMPORT WHEAT.

BY R. JAMES ABERNATHY.

An article by John R. Reavis which appeared in the August issue of the AMERICAN ELEVATOR AND GRAIN TRADE seems to demand attention, not so much because of the article itself as because of its following a series by different writers, all of the same tenor, all trying to prove that the United States has reached the limits of wheat production and will ere long become a wheat-buyer instead of a wheat-seller as heretofore.

Mr. Reavis weakens his general position very materially by stating that one county in Washington is capable of producing 75,000,000 bushels of wheat. It is true the county is a little large, comprising about one-ninth of the area of the state; but if the remainder of the state is naturally as productive, the limit of possibilities will not have been reached until 675,000,000 bushels of wheat is grown in a single crop. The local pride of Mr. R., and an apparent desire to boom his section of the country, have undoubtedly warped his judgment and caused him to place too high an estimate upon the wheat-producing possibilities of his country and state. However, his declarations ought to start a line of thought that would put an effectual check upon the illogical conclusions arrived at by both him and his predecessors in magazine literature.

It would not, however, seem to be out of the way to place the ultimate capabilities of the state at 100,000,000 to 125,000,000 bushels after allowing all other products of the soil, likely to be cultivated in that region, a fair show; and if the other wheat-producing sections should keep pace, and there are no good reasons why they should not if conditions favored, several more generations will have passed away before this country will be obliged to import wheat. Even then, in proportion to area, Washington will not be doing quite so well as France, the former having an area of 69,994 square miles, against 204,096 square miles for the latter, which has grown as much as 324,000,000 bushels in one year.

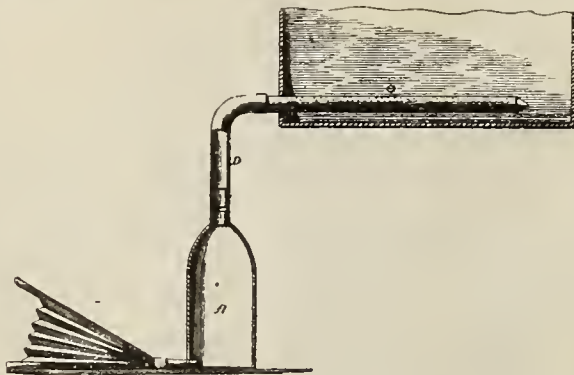
These people tell you that "the tide had turned by 1885 when the cultivated area had increased to 197,000,000 acres," which means that land available for agricultural purposes had by that time become practically exhausted. But as there are in excess of 1,900,000,000 acres included within the boundaries of the United States it would seem pertinent to inquire what they propose to do with the other 1,700,000,000 acres. It is true that a large area of mountains, lakes, rivers, etc., can never be cultivated, but is it possible in a great country like this, with its vast plains, its great valleys, its broad and immense prairies that but about 200,000,000 acres out of 1,900,000,000 are available for cultivation? Would it not be within bounds to claim that at least 500,000,000 acres are naturally available and will be ultimately cultivated? Are there not other countries that cultivate a much larger proportion of the whole area?

These are questions that persons inclined to get alarmed over the situation will do well to consider. England's area in acres is 32,597,000. In 1880 there were 9,644,000 in actual cultivation and 2,646,000 in rotation grasses, making a cultivated area of 12,290,000 out of a total of 32,597,000 acres. In permanent pastures, not including heath and mountain land, there were 11,462,000 acres. It is not likely that as a whole this country could do so well as England, but if we can even do half so well we would still have about 500,000,000 acres for cultivation. Of the 77,829,000 acres contained in the United Kingdom 21,806,000 acres were in cultivation, including the rotation grasses, in 1880, with 24,717,000 in permanent pasture. When we take into consideration the character of the surface of the United Kingdom as a whole, especially Western England, Wales and Scotland, this country ought to do proportionately better in the way of

available arable land, which would still allow us 500,000,000 acres, or more, for cultivation.

It is, of course, claimed that much of our still unoccupied land is unavailable on account of no rains, but that is purely speculative. This year there will be harvested millions upon millions of bushels of wheat, corn, oats, etc., off of what was once called the Great American Desert, or sand basin, on which it was thought nothing could ever be grown. Many bountiful harvests have since been reaped on that same desert. Just so it will be with other sections now thought unavailable for the same reasons. Years hence all those vast acres will blossom and be burdened with heavy crops of wheat, corn and other grains, just as the other once condemned spots now are.

If we increase our cultivated area to 500,000,000 acres, or upward, 70,000,000 acres ought to be available for wheat-raising, possibly much more. If we should ever have that area and bring our yield up by high cultivation, which time will compel us to do, to about an English average of thirty bushels to the acre, we would have a crop of 2,100,000,000 bushels. In 1868 the English average was thirty-four bushels to the acre. In 1879, however, it was only eighteen, but it is usually high. Our friends, determined to curtail wheat production in this country whether or no, will hold up their hands in amazement at the idea of us ever equaling or even approaching England in yields. Perhaps we cannot, but I am as yet unable to see why. We frequently hear of crops of forty five bushels and above to the acre grown on ground that has had no aids, simply the outcome of natural soil. If the same methods of high cultivation and annual artificial enrichments of the soil were pursued here as in England,



FUMIGATOR FOR GRAIN BINS.

why could we not grow as much wheat per acre as there, especially in a season like this has been. Can anybody tell? It is true that in a country so vast in area unfavorable seasons would be likely to reduce the general average more than in England on account of the smallness of its area. But for any other reason why should we not produce as much wheat here as there if our farmers till and take care of the land in the same way?

But I will drop that mode of arguing the case, although nothing impossible has been suggested, and make some other comparisons. Ought not we to be able to produce as much wheat per square mile of area, when the whole of the land is utilized, as is done in France for instance? Without thinking most uninformed persons would say yes; but let us see what that would mean. There is a little less than 3,000,000 square miles in the United States proper, and a little less than 205,000 square miles in France, or about fourteen to one in favor of this country. As stated, France has harvested 324,000,000 bushels of wheat in one year, and at the same rate our crop would be about 4,500,000,000 bushels. Of course it would not do to linger on that proposition because it would strike such terror to the hearts of the wheat culture destroying experts as to render them unable to consider other phases of the case which I wish to present. If our country was as densely populated as France and we used all the available ground and pursued the same course as the French do, I do not see why we should not raise about the same amount of wheat in proportion to area; but for reasons above given, will not insist on the matter.

To make comparisons more in harmony with opposing views I will broaden the field of observation and first take that portion of Europe in which will be found Austria-Hungary, Germany, France, United Kingdom, Spain, Italy, Turkey, Roumania, Belgium and the Netherlands. This part of Europe contains but a small portion of the great low lying basin, but is high and rugged, traversed by the Alps, Pyrenees, Apennines, the Balkan, Carpathian and Caucasus ranges of mountains. Besides much of the territory is in "sunny" Europe and

is better adapted to growing fruits than grain. The area of the territory is a little in excess of 1,200,000 square miles. For a similar area in the United States I will name the states of Pennsylvania, Ohio, Indiana, Michigan, Wisconsin, Illinois, Tennessee, Kentucky, Missouri, Iowa, Minnesota, Dakota, Nebraska, Kansas, California, Oregon and Washington.

Compare, if you please, the natural agricultural advantages of the two districts and ask if in all things the American district is not superior to the European? With the same kind of culture and care could not as much of cereal products be raised in the American states named as in the European countries named? Certainly, no one will deny it. Well, then, the wheat product of that section of Europe is about 950,000,000 bushels annually. If that part of Europe can produce that amount of wheat so can the states above named, and so they eventually will. But outside the states named there is left about 1,700,000,000 acres within the limits of the United States which can be depended upon for producing considerable wheat. When, then, are we to become buyers instead of sellers of wheat? It can safely be said, without being moved by a spirit of prophecy, that a hundred more years will have passed in review and joined the solemn march of bygone centuries, before the time arrives.

Not only will we increase the wheat-growing area as time goes on, but we will also learn the art of increasing the yield. From out of the window, as I write, I can almost see vast wheat fields that have been producing wheat and other grains for more than 150 years and yet this year there are crops running as high as forty bushels to the acre, and from thirty to forty bushels is a frequent occurrence in good seasons. How is it done? Simply by scientific, high, skillful and careful cultivation. As they do it here so will they learn to do it elsewhere; everywhere, as the necessity is made apparent. And so with increasing area and increased production we will continue to produce wheat enough and to spare for many generations yet to come. Whatever the people of any other part of the world are capable of doing, so are the people of the United States. Whatever may be the capabilities of the average soil of other parts of the globe so are the capabilities of the average soil of this unsurpassed country of ours.

Again will I predict from a perfectly logical standpoint, that instead of becoming wheat buyers, by the close of the present century, if there should be an era of high prices, of which there does not now seem to be any ground for doubt, before eight years have passed our wheat crops will be running from 600,000,000 to 700,000,000 bushels, and our farmers' granaries will be full. Public warehouses and elevators will be groaning under their great load; there will be wheat, wheat everywhere, and nobody to buy. Bears will be in their glory and again at their wicked practice of hammering lifeless markets. Wheat production will fall off, general demoralization will prevail; and a little later defunct Alliances, nee Greenbackism, will be showing their heads with another name that will smell just as rank; and still later we will be regaled with learned essays on the restricted limits of wheat production; and still later the frisky bears will be reaching for the tops of the loftiest trees, while the bulls will be pawing the earth in mad delight; and so on forever, as elevations follow depressions and vice versa.

This is the way one Kansas farmer looks at it: What's the matter with the times, anyway? A farmer loads up fifty bushels of wheat on a wagon and starts to Garnet; his son follows with a load of corn, while the hired man follows with a load of hay. He gets from 90 cents to \$1 for his wheat, 60 cents for his corn, and \$10 for hay. He takes the checks he gets for his grain and hay to the bank and asks for and gets gold coin. He puts it down in his jeans, goes down to George and Joe's and buys 20 pounds of granulated sugar for \$1. He buys muslin for 5 cents a yard, calico the same. He goes to the hardware store and buys barbed wire for 3 and 3½ cents per pound, and other things in proportion, including tin cups. He goes to Wagstaff's and buys a suit of clothes, all wool, for \$10, good enough for a president of a township Alliance to wear. There never has been a time from the foundation of the government to the present, when a bushel of corn or wheat would buy as much as it does to day, and yet some people will get up at night and burn their shirt to make a light to see to do—the way things are all going to pot.

SHORTAGES IN LAKE SHIPMENTS.

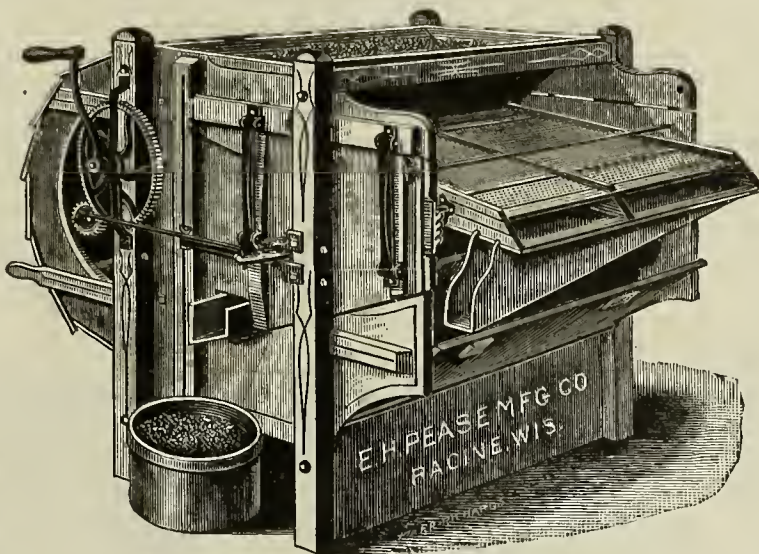
There can no longer be any doubt regarding the financial responsibility for grain shortages. A vessel must discharge all that her bill of lading calls for, as in all other cases, down sweeps a mulctuary and demands restitution. But, what is there to restore in the event of a vessel turning out a shortage, surely no court of justice would accuse the master, officers or crew of barratry without having the faintest shadow of evidence of such an act being committed. The consensus of practical, technical and professional opinions lean to the belief that no grain would be abstracted from a vessel's cargo during the few days required in its transportation from one lake port to another, nor has there been any direct charge to that effect in the past, so that beyond the elevator weigh-clerk's testimony on which (after all the mate's supervision) the bills of lading are signed, it would be difficult to conceive how a ship might be held responsible for shortage if bills of lading were made to read "more or less" and the forwarders had recourse to the elevator weights and measures at the port of discharge.

It is now nearly two years since the owners of the steamer R. R. Rhodes found that their vessel measured out a shortage of over 800 bushels of wheat. On a fall trip from Duluth to Buffalo, under ordinary conditions of weather at that season of the year the grain might have absorbed moisture to a greater or less extent and sufficient to have shown a favorable output for the vessel, but the contrary obtained and the large shortage was somewhat of a "corker" to her owners who expected to receive freight for the gross amount said to have been placed aboard of the vessel instead of which they were charged with an unreasonable loss. The owners of the steamer carried the case into court. As it did not appear equitable to deduct such a large amount from the vessel's earnings, the court rendered a verdict for defendant, and the case was carried to the Supreme Court, where a similar decision was rendered. The owners of the vessel still determined to settle the question beyond doubt carried the case to the highest court in the state and the Court of Appeals affirmed the judgment of the lower courts, thus setting at rest any further litigation regarding shortages, at least for some time to come. It would now be in order for vesselmen to secure the extra value on a surplus, however small, and furthermore, note carefully the elevators at which shortages are found so that extra safeguards may be taken to verify the amount handled when loading and discharging, so that no more shortages such as have occurred at Fairport only this season can be perpetrated on the vessels. The shippers of grain from interior points have suffered perhaps as much as vessel owners, and it is to their interests also, to specially note the elevators reporting shortages in the shipment by rail or in reweighing into vessels. Unwarrantable and frequently large shortages give the impression that a good sized Ethiopian has been lingering around the primeval forests erected by the Western grain handling combine for some years, though we are pleased to note that recent discoveries are such that more equitable methods are likely to obtain in the future. These discoveries point clearly to the framing of a more suitable bill of lading than the so-called cut throat one now in use which charges to the vessel the market value of every bushel short, although it was never put into her. The present form of bill of lading is well called a cut-throat one, for it is unjust and irregular in awarding to the vessel the total freight due as per bill of lading and then deducting the cost of any shortage, so that the vessel collects unearned freight and then pays for the value of a commodity which was never shipped. On the other hand she is awarded pay for an over-run of grain which rightfully belongs to the shipper, at the same time collecting only the freight on the amount called for as per bill of lading less the over-run. On the above showing the method of shipment is irregular, inequitable and damaging to the last degree. The vessel should collect freight only on the amount she carries, and the commodity itself, in no sense should be awarded to the vessel. The grain is carried for its freight, and freight only, and no ownership of any portion of the cargo, let the over-run be great or small, is involved in the act of a common carrier. In the event of a shortage, the vessel is under a pecuniary penalty to the amount of the freight on the lesser quantity than her bill of lading

calls for, and when discharging more than is stated on her bill of lading—freight on the over-plus only ought to be collected. It is therefore to be hoped that should a similar case of large shortage arise the courts will take into consideration the fact that the vessel is by no means the owner of an over plus in the commodity, nor yet answerable, only in so far as reduced earnings are concerned, for a shortage.—*Marine Record.*

FLAX-CLEANING MACHINERY.

The largely increased acreage of flax sown this year throughout the West and Northwest, and the abundant manner in which it is yielding, undoubtedly create an interest on the part of many of our readers located in those regions where it is grown as to how the crop is to be



THE PEASE SPECIAL FLAX MILL.

handled to the best advantage to the operator. The volume at which flax may be handled per hour or day depends upon the percentage to which the operator wishes to "reduce" (clean) it, and both the volume and percentage depend greatly upon the merits of the machine by which

and screens are made of perforated zinc. Though regularly fitted with sieving and screens for handling flax only, the company can and frequently do equip it with sieves, etc., for handling any or all other kinds of seed or grain, and the same features that make it so desirable as a cleaner of flax make it far superior to the ordinary warehouse separator for cleaning, separating and screening timothy, clover and other fine seeds.

To the handlers of considerable quantities of flax the Flax Reeling Machine shown on this page is of special interest. It is made single, double or quadruple in style, viz., with one, two or four reels in a chest, and either with or without scalping shoe attachment. The latter is a very desirable accessory, though not a necessity to the machine. Its use greatly increases the capacity and efficiency of the reels themselves. In dimensions these machines may be made almost any size or shape to suit the desires of purchasers or the amount of space one has in which to locate the machine. While regular sizes are such as to enable them to be located in almost any country grain elevator, some idea may be gained of size to which they are frequently made when we say that the company has just delivered to the new Minnesota Elevator of Chicago two machines, each 18 feet long (equaling 36 lineal feet of reels), 10 feet high and 4 feet and 3 inches wide.

The reels themselves may be clothed with either wire cloth, perforated zinc or perforated steel. Special features of merit peculiar to these machines are that each reel revolves on a perfectly horizontal shaft, and is so tapered from end to end as to give a lively flow to the flax. The frames of each reel are also made in sections or panels with the clothing fastened to the inside of the ribs. This has the advantage that all shafts run perfectly horizontal, consequently all wheels and drive belts run perpendicular and parallel, making it the lightest running machine of the kind in the market. The superior quality of the work is amply attested by the number of extensive handlers who have adopted and are using same, a partial list of whom will be found in connection with the company's advertisement on page 65. The E. H. Pease Manufacturing Company of Racine, Wis., invite correspondence and will gladly forward their catalogues and give all desired information to parties contemplating the purchase of machinery of this character.

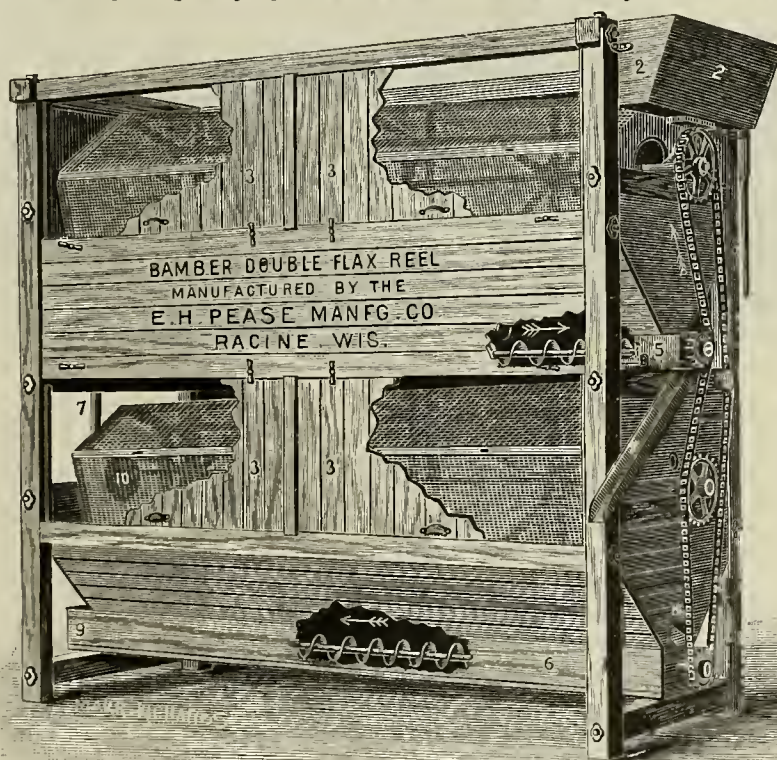
SEPTEMBER CROP REPORT.

The statistician of the Department of Agriculture reports the September general averages of cereal crops as follows: Corn, 91.1; wheat, 96.8; rye, 95.1; oats, 90.7; barley, 94.3; buckwheat, 96.6. A small advance is noted in all; buckwheat alone excels. The average for potatoes is 94.8; for tobacco, 87.4. The condition of corn is 31 points higher than in September of last year, and has been exceeded only three times in the past ten years. State averages are generally high. The lowest are those of Michigan and Wisconsin, Minnesota and North Dakota coming next, while South Dakota, Nebraska and Kansas make figures under the general average.

In the Eastern and Middle states the crop is well grown, is generally earing well but a little late, and recent cool nights prevent rapid advancement, yet frost has as yet done no damage. The crop is in fine condition in the Southern states. It is not so much injured by heavy rains as cotton. In some bottomlands water has caused material injury, while on uplands the crop is remarkably good. It was somewhat late, but is now generally beyond the reach of frost. A fine yield has been made west of the Mississippi, though in Western Texas it is a little reduced by drouth. It is a crop decidedly above medium throughout the South as a whole. Many correspondents refer to it as the best in years.

In the Ohio Valley corn is heavy in stalk, somewhat late in earing from cool nights, and in some places has been blown down by heavy winds, yet is generally very promising. Local drouths are mentioned at a few points as a cause of deterioration, without producing very serious loss.

The area in the United States devoted to winter wheat in 1891 was 26,244,940 acres, to spring wheat 12,992,000 acres, and to corn 77,943,000 acres.



FLAX REELING MACHINE.

it's to be handled. It is possibly needless to suggest that profit to the flax handler is very contingent upon a superior machine, and once the latter establishes its merit such a machine is in active demand.

Perhaps no greater compliment can be given the flax machines we present on this page than the extent to which they have found their own way into the possession and use of a majority of the well known and most extensive flax handlers of the West. The Pease Special Flax Mill is designed for and used largely by the flax handlers at country stations. It is either a hand or power machine. As a machine for cleaning "seed flax" it has no superior. Each machine is furnished with a full complement of sieves both for cleaning seed flax, which requires to be very nicely done, and for the coarser and more rapid work done by shippers. The machine is constructed upon the same principle as the side-shake warehouse fanning mills made by the same company, but has a much larger sieve and screen surface, and all its sieves

TEXAS A WHEAT EXPORTER.

The probability of Texas becoming a great wheat growing state, and instead of an importer, becoming an important exporter of that cereal, is interesting business men and grain growers of that state. An earnest of this has been given by an export of 90,000 bushels of 1891 Texas wheat from Galveston to Cork for orders. The grain was grown in the Panhandle of Texas, near Wichita Falls. The freight from that point to Galveston was 17½ cents, and the value in the elevator at Galveston was placed at 90 to 91 cents, when it was selling at 96 cents in New York. From Galveston to Liverpool the cost of carriage was 3 cents more than from New York. But this is not the only feature of the trade of interest. St. Louis, New Orleans and Chicago dealers will be interested to learn that the freight from common points in Texas to Galveston is 7½ cents cheaper than it is to St. Louis or New Orleans. Galveston dealers claim "that they are entitled to a differential just double that, or 15 cents, and they are already working for it. The St. Louis *Globe Democrat* says "they did have the same from Kansas as Chicago had, but it was taken away from them. Texas wheat can't help going to the Gulf. Kansas wheat will follow it if influences cannot prevent the restoration of rates. As it is now there is a difference of 7½ cents on Kansas freight in favor of Galveston as against New Orleans, and the Texas roads and Texas people are wishing to get it made 15 cents. They may not be able to revolutionize transportation rates in a season, but the sailing of the first shipload of wheat is a significant beginning. It settles the problem so far as the 12,000 carloads of grain in the Panhandle is concerned. There is enough in this to make St. Louis and Chicago grain men do some thinking. Kansas wheat from several points can be put down to day at the Gulf cheaper than at Chicago. *

* * * The 90,000 bushels of wheat were taken from the railroad tracks by the elevator on land. It was run out by a belt 2½ feet wide across the dock and into the ship in fifteen hours. The representative of the English steamship line says that the facilities were equal to those of any other port, and that his company will guarantee the same rate from Galveston to Liverpool as from New York whenever deep water over the bar was obtained, and there is the meat in the nut. With the same rate from Galveston to Liverpool as from New York, which way will the grain grown midway between the lakes and the Gulf go?" asks the correspondent of the St. Louis paper named. Deep water is, apparently, likely to prove a very important factor.

Col. S. W. Fordyce of the "Cotton Belt" Railroad, is quoted as follows: "Eastern connections and relations don't concern us so much. We are looking toward the Gulf of Mexico. There is where the transportation problems of the near future will be." Regarding the probable supply of wheat for home and foreign consumption in years to come, there seems to be but one opinion. Three years ago Texas did not pretend to be able to grow wheat in large quantities for export. The yield this year is placed at 7,500,000 bushels, of which the Panhandle produced 6,500,000 bushels. This section is claimed to be a "natural" wheat country. It is said to be a lime or gypsum soil, and to have the necessary altitude (2,000 feet above the sea) for wheat growing. Twenty counties of Northwest Texas are said to be included in this wheat growing area, which, by the way, does not include the whole of the Texas Panhandle. The correspondence already quoted says:

"Not one tenth of this land is occupied, yet it turns out this year 6,500,000 bushels of wheat. There is the soil and the room in this Panhandle country for 65,000,000

bushels of wheat. Do not get the wrong idea of this. All of the Panhandle is not wheat land. The belt begins north of Fort Worth and extends in a northwesterly direction, but not to the boundary of Texas. When you come to the Canadian River you have passed beyond the limit of successful wheat raising in Texas. At the Canadian you strike the red sandstone drift from the Rockies. You are out of the wheat belt there. The limestone drift from the mountains of Southern New Mexico makes the wheat region of Northwest Texas. The red sandstone drift comes from the Rockies further north. You strike it at the Canadian in the Panhandle, and you find no more natural wheat land until you get into Northern Colorado."

Though having many favorable aspects the probable large export wheat movement this year from Texas, however, has its disadvantages, for it is declared that Texas will require wheat later in the season, and have to pay more for it than she can get for it now for export.

TERMINAL ELEVATOR AT SEATTLE.

More grain was banded at Seattle, Wash., last year than ever before, and the prospects are that the receipts for this year will greatly exceed the receipts for any preceding year, and the elevator illustrated herewith, which is the property of the Seattle Terminal Railway and Elevator Company, will handle most of the grain received.

The building is a warehouse and elevator combined, and is fitted with machinery for handling bulk and sacked

vide the power for working this machinery is a Corliss of 120-horse power. It is in the elevator.

The boiler house is a brick building 30x36 feet, and has a stone foundation. This house contains two boilers and an immense pumping engine. The water to supply the boiler is brought by a pipe line from a spring back in the hills. Mr. F. A. Allen is manager of the company.

The illustration first appeared in a very interesting folder published by the German-American Investment and Guaranty Company of Seattle, Wash.

LOSSES OCCASIONED BY INSECTS.

No very recent estimates of the loss arising from insect ravages have been made, but some of the older estimates are here given. Twenty-five years ago B. D. Walsh, the entomologist of Illinois, estimated the loss from this source at from \$200,000,000 to \$300,000,000 per annum. The great increase in acreage of crops and orchards since that date has been attended, of course, with a corresponding increase in destructiveness; but methods of prevention and remedies have so multiplied and improved that the ratio of loss is greatly decreased. Fitch, then New York state entomologist, estimated the damage to the wheat crop of that state in the year 1854 by the wheat midge at \$15,000,000. The loss to wheat and corn on account of the ravages of the chinch bug in the state of Illinois alone in 1867 was estimated at \$73,000,000.

The loss occasioned in 1874 to corn, vegetables and other crops by the Rocky Mountain locust in the states of Kansas, Nebraska, Iowa and Missouri was estimated by Riley, from carefully collected data, at \$100,000,000, to say nothing of the indirect loss by stoppage of business and other enterprises, which would probably increase the total loss to the neighborhood of about \$200,000,000.

The wheat midge, popularly known as the "Red Weevil," has appeared this year in injurious numbers at the Ohio

experiment station. In 1852 to 1857 this insect did an immense amount of damage in Ohio, Indiana and New York, its work culminating in Ohio in the almost complete destruction of the crop in the northern and eastern counties in 1854, the total loss in the state from this insect in this one year being not less than 8,000,000 bushels. In 1860 to 1866 it was also prevalent in various parts of the state, although no such widespread destruction was accomplished as in 1854. Judging from its past history there is danger of another destructive outbreak, and in view of this danger the entomologist of the experiment station desires that farmers everywhere who may have noticed this insect in their wheat should write to the station, stating the amount of injury done, the varieties of wheat most affected, and giving any observations they may have made concerning its habits.

The damage occasioned by the chinch bug in the year 1887 was estimated in the annual report of the Agricultural Department for that year at not less than \$60,000,000. Dr. Riley has in fact repeatedly published the general estimate that the average annual loss to the United States from injurious insects exceeds \$300,000,000.

The investigations of the United States Entomological Commission and of the Division of Entomology, Department of Agriculture, and also of state experiment station entomologists and private workers, have led to the discovery of remedies and preventives, which, properly and thoroughly applied, result in saving a large percentage of the loss occasioned by insects, and these investigations have paid for themselves many thousandfold.

Heavy losses have caused the closing of the last bucket shop in St. Louis.



TERMINAL ELEVATOR AT SEATTLE.

grain. The main building, of which we give a cut herewith, is 531 feet long, 121 feet wide and two stories high, with an elevator in the center 40x90 and 100 feet high.

In the northwest corner of the main building is a handsome set of offices, and about the center of the building is a stairway leading to the next floor. A 14-foot platform extends around the entire building, and along the west side of building is a side track onto which cars are run when it is desired to unload them onto the first floor. Another track runs into the building at the south end of the second floor. Fourteen cars can stand on this track inside the building and be unloaded at the same time. If cars are loaded with bulk grain they are unloaded by means of steam scoops into the bins provided. If the wheat is in sacks it is unloaded by hand, and the contents of each car placed by itself. When the loose wheat is discharged into the bins it is conveyed to the top of the elevator where it is discharged into bins to await sacking. The storage capacity of the elevator is about 100,000 bushels; and the capacity of the warehouse is 1,500,000 bushels.

On the east side of the main building are two wings, 30x60 feet, extending out to deep water, so that the largest sea going vessel can be taken to the wharf even at low tide. The ends of these wings or chutes can be raised or lowered at will. Through these the grain is conveyed by means of a steam carrier. When the wheat on any particular floor is to be loaded onto the ship, one end of the carrier is raised to a level with that floor and the other end is on the ship, the chain is set in motion, and as it consists of planks set in iron frames, about a foot apart, a sack placed on it is quickly carried to the end. The sacks are placed upon the chain by a force of men, and in this way the ship is soon loaded. The engine to pro-

SHOULD THE METHOD OF TRADING IN FUTURES BE CHANGED.

This is the season when farmers begin to grumble against boards of trade and assert that the short sellers are engaged in their usual effort to make a low market for farm products, particularly wheat and the other cereals which enter largely into speculation. There is some ground for their irritation. It is possible that the system of trading in futures, now so popular, has been carried to an abuse. The Farmers' Alliances and their demagogical apostles have, perhaps, only a vague conception of the nature of the injury which they believe has been inflicted, and they may have no conception whatever of the cure; but they are none the less loud voiced in their protestations against the further infliction of what they are pleased to term a wrong.

They are insisting—and in a manner to cause more or less agitation among those who can see no wrong in the method of trading in futures as now practiced—upon radical remedial legislation. They say that inasmuch as the great exchanges saw fit to antagonize the Butterworth bill, which was looked upon by radical agitators as only a preliminary step for the protection of the agricultural interests, a measure much more drastic in its operations will be forced through Congress. It is early yet to agitate this subject, yet the farmers feel, or pretend to feel, that they are already being hurt, and that the time to begin making a noise is while the pain is felt.

It is within the range of possibility that the exchanges may be brought to see that after all a change in the system of trading may not operate to their disadvantage. It may be found possible to trade in wheat, and corn and oats and other grains on a cash basis, as stocks are traded in on the New York Stock Exchange and other organizations of a similar character. No pretense is made that the volume of speculation is curtailed to any important extent in stocks by reason of the fact that all transactions are strictly for cash; and may it not be possible that a system similar in almost every respect might be introduced with profit on the Chicago Board of Trade and kindred exchanges in other cities? The seller of stocks may not have the stocks to deliver at the time he makes the trade, but he must in some manner procure them within a certain specified time. If he does not already own them he does this by borrowing the stocks of holders and paying therefor a small percentage, which percentage is regulated by the demand, ranging greater or less, as the urgency of the short sellers may dictate. Why could not this same plan be put in force with regard to grain? Might not such a system result in equalizing the carrying charges, which are now a serious handicap upon investors and upon the property itself? Under existing conditions wheat, corn and oats are burdened with a tax from the moment the seed is put into the ground. This tax does not begin to accumulate, apparently, until the grain has left the harvest field and is on the way to the great markets; but as a matter of fact, the property is handicapped from this entire inception. Investors and producers have the very burden to carry, and the short sellers have an advantage to the extent of the full accumulation of charges of all sorts—transportation, insurance, storage, commissions, etc. They figure that the property cannot carry this burden and advance to a point beyond it which will give holders of the property a profit. They argue generally that grain will not be worth any more one month or two months or six months hence, than it is to day, and that they have just the advantage over investors which is represented by all these accumulated charges. Therefore, they feel a certain degree of safety in offering property for future delivery at a price which pays them a liberal premium, thereby gaining the carrying charges just as surely as if they owned the elevators in which the grain was stored, and the railroads upon which the grain was carried, and the insurance companies and banks which collect additional toll.

If the short seller, using the term in a collective sense, were compelled to deliver the grain that he sells, and pay the owner a per cent for the property to deliver on contracts, the carrying charges would be fairly equalized in the long run. Possibly, also, this process might result in the filling up of the warehouses with grain, for capital would find profitable employment in investments in large quantities of grain as a basis for such operations. Excessive speculative short selling, which is beyond any question a burden upon production, and a serious handicap upon investment of speculative capital, would be measurably reduced; that is to say, it would be curtailed to reasonable limits, and the onerous feature would be

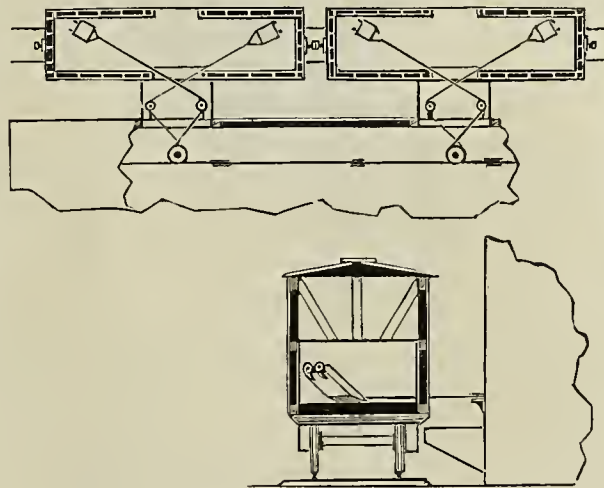
measurably eliminated. Such at least is the dream of a great many people who have given the subject great and attentive thought. A little experience might relieve the speculative trade of the horror which it now feels of contact with actual grain. In the stock market the operators do not feel this fear. It might not necessarily follow that the average price of grain would be higher, taking it year by year, for supply and demand is the ultimate regulator of values, but a system of cash dealings would certainly give the producer an even chance with the short seller which he does not now enjoy.

The *Economist* is not fully satisfied that the change suggested would be to the advantage of the trade and general public, but the matter is at least entitled to the fullest and freest consideration in a dispassionate and judicial spirit.

If the grain merchants do not do a little hard thinking on the subject, the farmers and their allies will do the thinking for them, and possibly in an offensive manner. The strangulation of the Butterworth bill last winter merely postpones action; it did not kill the sentiment that was back of it, or remove the grievance, real or imaginary, which the agricultural classes feel they have a right to complain about.—*Economist, Chicago.*

A NEW POWER GRAIN SHOVEL.

The grain shoveling apparatus illustrated herewith, the invention of Mr. Allan G. Mather of Duluth, Minn., is designed to unload a car in the space of a few minutes with mechanical power. The receiving sink of the elevator is supposed to be ranged along the track at such intervals as to correspond with the car doors, two or more of which cars may be unloaded at the same time. Within the building is a cable that passes around grooved wheels



NEW POWER SHOVEL.

journaled at a suitable distance apart, one wheel being adapted to adjust the tension. The stationary cable pulley wheel is driven by a friction wheel arranged to be thrown into engagement by a lever. Within the car is placed a drag scoop, somewhat similar to the familiar road scraper, yet without its cumbersomeness. A rope extends from the bail of this scraper to a sheave pulley secured to a bracket above the receiving sink and about level with the car floor. Passing around the pulley, thence around another that is nearly in line with the power cable, the rope is attached to the latter by a peculiarly formed clutch, which is so contrived that when it draws the load to a certain predetermined distance, its contact with a stop causes its disengagement with the power cable, and it slips freely back as the operator draws back the scoop in the car for another load. The operation is very rapid, equaling half a dozen men, and a train can soon be relieved of its cargo.

President W. C. Van Horne of the Canadian Pacific Railway Company says that Quebec will be used as a port of shipment for Canadian grain, the enormous increase of the Canadian wheat crop in the Northwest baving more than exhausted Montreal's terminal facilities. Elevators are to be built immediately by Contractor Charlebois.

As a preliminary step toward educating the foreign visitors to the World's Fair to appreciate the value of corn as a cheap and wholesome food, the Illinois State Board of Agriculture has decided to hold at the Illinois State Fair a mammoth corn show, which shall excel in completeness of detail and execution, anything of the kind heretofore devised.

INSURING THE BIG CROP.

According to current reports from all parts of the country, particularly in the great Northwest, the largest and best grain crop will be harvested this year that the country has ever known.

All this grain will have to be stored, and much of it will be held for months in grain warehouses, elevators and granaries. Of course it will have to be insured, as the shipper, as well as the warehouseman, will need advances, and the party who furnishes the money will require good fire insurance as a part of his security. In the great storehouses, where over a million bushels can be put in one house, there is a demand for a sufficient amount of fire insurance, added to that which is required on the building, machinery and storage charges, to need every good stock company's policy which is authorized to write, and there is no occasion for either competition on rates or persistent solicitation to procure it, as it will, in some places at least, "go begging." There is, of course, a right way and a wrong way to do everything. The right way to do grain insurance is to get good, compensating rates to begin with. If the insurance is required for a short time only, then full short rates should in all cases be charged, as even the grain merchant won't sell a bushel at the same relative price that he will take for 10,000 bushels, and the rules, which are old and well maintained, require it. In some places owners are now in the habit of taking yearly insurance on grain, and if sold before the expiration of the time, canceling at short rates, as it costs less relatively, than it does to be taking on and canceling off every few days.

But we started out to suggest that now while grain warehouses and elevators are about empty, it is a good time to have owners and lessees clean up and put the machinery in good order. The chief hazard, apart from exposures, is from dust explosions and friction from machinery. Good, careful owners only need to be reminded of these dangers to cause them to use necessary precautions, and all of them who are at all well disposed will take a suggestion to clean up and line up the shafting, etc., kindly, and give it a prompt compliance. Many fires can be prevented by these simple precautionary measures, and property saved is just as good as property earned.—*Once-in-A-while.*

CHICAGO'S ELEVATORS.

The following table contains a list of all the "regular" houses in Chicago, with the names of the owners, capacity and the railroads they receive from:

Proprietors.	Name of Elevator.	Received From.	Capacity Bushels.
Armour Elevator Co.	Armour A and B.	C. M. & St. P.	2,500,000
Central Elevator Co.	Central A.	Illinois Central	1,000,000
Chicago & Pacific.	Central B and Annex.	Illinois Central	1,800,000
Chicago Elevator Co.	Pacific B.	C. M. & St. P.	1,000,000
Chicago Elevator Co.	Wabash.	W. St. L. & P.	1,500,000
Chicago Elevator Co.	Indiana.	Various roads.	1,250,000
Chicago Elevator Co.	Burlington A.	C. B. & Q.	800,000
Chicago Elevator Co.	Burlington B.	C. B. & Q.	1,500,000
Chicago Elevator Co.	Burlington C.	C. B. & Q.	3,000,000
Chicago Elevator Co.	Burlington D and Annex.	C. B. & Q.	1,250,000
Chicago Elevator Co.	Rock Island A.	C. I. & P.	1,000,000
Chicago Elevator Co.	Rock Island B.	Chicago and Canal.	700,000
Chicago Elevator Co.	Neely's Elevator.	Chicago & Alton.	700,000
Chicago Elevator Co.	Galeana Elevator.	C. & N. W.	700,000
Chicago Elevator Co.	Air Line Elevator.	C. & N. W.	400,000
Chicago Elevator Co.	Fulton Elevator.	C. M. St. P. & Canal.	400,000
Chicago Elevator Co.	City Elevator.	Railroad and Canal.	1,000,000
Chicago Elevator Co.	Union.	C. & N. W.	800,000
Chicago Elevator Co.	Iowa.	C. & N. W.	1,500,000
Chicago Elevator Co.	St. Paul.	C. M. & St. P.	900,000
Chicago Elevator Co.	Illinois River.	Canal.	175,000
Chicago Elevator Co.	Santa Fe A.	A. T. & Santa Fe.	1,500,000
Chicago Elevator Co.	Alton "B".	C. & A.	1,100,000
Chicago Elevator Co.	National.	C. & A.	500,000
Chicago Elevator Co.	Chicago & St. L.	C. & A. and Canal.	1,000,000
Chicago Elevator Co.	Chicago & St. L.	C. & A. and Canal.	1,100,000
Chicago Elevator Co.	Chicago & St. L.	C. & A. and Canal.	30,075,000

Historians inform us that the same varieties of good wheat are now grown on the fertile soils on each side of the river Nile, in Egypt, with no signs of degeneracy, that were raised there a thousand years ago. Instead of there being a natural tendency in wheat to degenerate, if it is cultivated as it always should be, and none but the best seed put in, there would be a manifest tendency to improve from year to year.

COMMUNICATED

[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

READS WITH INTEREST.

Editor American Elevator and Grain Trade:—In inclosing you \$1 for a renewal of my subscription to your valuable journal, the AMERICAN ELEVATOR AND GRAIN TRADE, would say I am more than pleased with it. The articles that bear directly on matters of so much importance to a wheat buyer, as I class myself, are read by me with great interest. I remain,

Respectfully, W. F. CHALENOR,
Palouse City, Wash. Agent C. & C. Milling Co.

ELEVATOR PLANS.

Editor American Elevator and Grain Trade:—We would like to have plans for a small elevator building, and also the cost of same. Any information on this subject will be thankfully received. If you have a copy of the AMERICAN ELEVATOR AND GRAIN TRADE containing the above we would like a copy. Inclosed please find \$1 for which send us your journal.

FARRINGTON, SLAUSON & NELSON.

Piqua, O.

A TRIAL.

Editor American Elevator and Grain Trade:—Please send to our address the AMERICAN ELEVATOR AND GRAIN TRADE. Make subscription expire same date as the *American Miller*, so that they can both be renewed together. If the subjects pertaining to the grain trade are handled in a manner as efficient as subjects pertaining to milling are handled in the *American Miller*, we cannot afford to do business without it. Send bill, and we will remit at once.

Respectfully, A. C. McCUNE & SON.
Dawson, Pa.

DISSOLUTION.

Editor American Elevator and Grain Trade:—The partnership heretofore existing between Roblin & Atkinson as grain merchants, carrying on business in the city of Winnipeg, in the province of Manitoba, was on the 21st day of July dissolved by mutual consent. The partnership business will be wound up by Mr. Atkinson, who has taken over the assets and has assumed its liabilities.

We beg to advise you that a partnership has been formed between Arthur Atkinson of the late firm and D. W. Cumming, formerly banker at Birtle, under the firm name of A. Atkinson & Co., occupying the same premises in the Leland Block, Winnipeg.

In addition to all the buildings owned by the late firm of Roblin & Atkinson we shall, before the new season opens, add to them seven other buildings, including four steam elevators, and with the increased facilities and largely increased capital we hope to meet the requirements of our customers to better advantage than ever before.

Yours truly, A. ATKINSON & CO.
212 McWilliam street, Winnipeg, Man.

BISULPHIDE OF CARBON.

Editor American Elevator and Grain Trade:—Without doubt bisulphide of carbon is a sure specific against grain insects. Several have tried it at my suggestion, and report entire success. I think all would do so were they thorough in using it. Of course, its inflammable and explosive character, if mixed with air, makes caution all important if it is to be used. The presence of any fire would, or might, bring terrible disaster. As to grade, I think the best is preferable. It is so volatile that it escapes easily, and so druggists charge high for it.

To apply, I should close the room as tightly as possible all but one door, then scatter it very quickly, holding my breath, and at once leave the room and close the door. If preferred, one could stand at the door and pump it about the warehouse. It does not hurt grain, or even flour, if poured on it, as it all speedily evaporates. It might be well to try this on a small scale, as possibly some grades might do harm, though none that I have tried do so. The

necessity of the greatest caution is imperative. There is no danger with care; but some of us are terribly careless, and in this case want of care might destroy all.

Respectfully, A. J. COOK.
Agricultural College, Mich.

THE "WHEAT PLUGGER."

Editor American Elevator and Grain Trade:—The methods of the wheat plugger afford a good example of ways that are dark and tricks that are vain. His tricks are on a par with those of the farmer who accidentally allows dirt, stones and railroad iron to become mixed with his grain before he hauls it to the elevator.

The ambition of the wheat plugger is to get a higher grade for the grain he sells than it is entitled to, and in attempting it he falls into a pit of his own digging. He mixes good and bad wheat in a car so as to give it the appearance of the better quality. Dirt or low grade grain is spread on the floor of the car or placed all around the edges and in the corners. This is covered with good grain and the eye cannot detect the fraud. Sometimes a layer of poor stuff is spread between two layers of good grain, or a large quantity may be distributed through the load in pockets here and there.

Very rarely does the swindler profit by his arts, he more often loses. Although he may load a car so as to smuggle a wagon load through the inspection, yet in nine cases out of ten it is discovered and the whole carload is given the lowest grade possible. Many dishonest shippers who are not informed as to the way the inspector works with his sampling tube are puzzled to account for the accuracy with which he detects mixed loads of grain.

Shippers who do not take pains to load each grade into a car by itself complain that their grain is graded too low, when the fault is really their own. Knowing that a little poor grain will bring down the grade of a whole carload the careful shipper never mixes.

Yours respectfully, F. O. B. CARR.

THE SHIPPERS' THREE LOSSES.

Editor American Elevator and Grain Trade:—I wish to call the attention of country shippers to the fact that they bear, in addition to the loss by dockage at terminals for future shrinkage, the loss by shrinkage of what they hold during the winter season, and an extra loss on the reduced price received when they market their stored grain in the spring. Thus they suffer by loss in two ways on the grain held during the winter storage period in addition to the usual dockage for future shrinkage at terminals.

Now, do not think that I am going to try and discourage the holding of grain by country elevator owners during the winter, for that is farthest from my purpose. To illustrate, I will take the case of John Smith, who buys 12,000 bushels of wheat, and ships one-half of it to St. Louis during September, the other half he holds until May. That shipped first is docked three pounds to the bushel for future shrinkage, which amounts to a loss of 300 bushels to the country elevator man. The remainder of that shipped during September, that is, what is left after the public warehouseman helps himself, or 5,700 bushels, is purchased by a dealer at St. Louis as a "spec." He keeps it in the public warehouse until May, pays warehouse charges, but loses nothing by shrinkage, so can afford to sell his wheat cheaper than Smith, whose 6,000 bushels have really shrunk about 1 per cent., or 60 bushels. Smith then ships the 5,940 bushels he has kept in his house during the winter to St. Louis, and it is then docked about 100 bushels by the public warehouseman for future shrinkage, so that Smith has only 5,840 bushels of wheat left, although he bought and paid for 6,000 bushels.

The St. Louis buyer bought 5,700 bushels, which he still owns. Now, Mr. Smith, who has suffered a total loss of 460 bushels by dockage and shrinkage, has to compete as a seller in the open market with the St. Louis dealer who has suffered no loss by shrinkage or dockage.

The St. Louis dealer can in most cases afford to sell cheaper than Mr. Smith, and he does so, thus depreciating the market. If the St. Louis dealer had to bear the loss by shrinkage and dockage, he could not afford to sell so cheaply, and Mr. Smith could secure a higher price for his grain. The St. Louis dealer would insist on just as good a profit, and as his expenses would be higher he would be forced to demand a higher price.

Thus the country shipper loses in three ways by allowing his grain to be docked at terminals for future shrinkage. If the owners of all grain, that stored in public

warehouses at terminals as well as that in country warehouses, bore the loss by shrinkage as they should, the country elevator man could realize a larger profit by keeping his house partially filled with grain during the winter. Let public warehousemen dock grain for shrinkage when it is taken out, if they must dock it. Then those who owned it while it shrank will stand the loss, as they should.

Yours for reform,

B. A. SHIPPER.

THE FATAL BIN.

Editor American Elevator and Grain Trade:—Nearly all persons who have operated or been employed in grain elevators and warehouses, know that deaths by suffocation in grain are of common occurrence. These unfortunate accidents are very much to be regretted inasmuch as many of them might have been prevented. Not a few proprietors blame themselves for deaths happening on their premises; and ever after the reading of similar occurrences never fail to call up feelings of remorse.

The victim is usually a small boy who has clambered into a grain bin while playing hide-and-seek; sometimes he falls in, at other times his prying curiosity leads him to his sad end. Even adults who are elevator men meet death in their own bins, as, for instance, a man at Brownsburg, Ind., who on Aug. 12 was smothered in a bin which he had entered to remove an obstruction to the discharge opening. He, however, may have been inexperienced as he had completed his elevator only a month before. A perusal of a file of the AMERICAN ELEVATOR AND GRAIN TRADE, especially the column devoted to casualties, would force the reader to conclude that deaths by suffocation in grain bins are by no means infrequent. There being no one near on such occasions to render assistance, the unfortunate usually has to depend upon his own exertions for release, often without success. As he realizes that death is near his agonized struggles give place to extreme anguish until unconsciousness mercifully puts an end to the torture of his mind.

As a prevention I would suggest that all children and irresponsible persons be kept away from the premises, and that signs be nailed up refusing admittance except to those who may have business to transact. Such a course would decrease the number of accidents, but nevertheless some persons might get into the building and fall into a bin. To save any such from the consequences of their folly I would suggest that a stout rope be kept suspended from the top of the bin hanging down through the middle so that it could easily be grasped. The captive could then lay hold of the rope and keep his head above the grain even in the most dangerous cases, as when the grain is running out of the bin at the bottom and pouring in at the top, thus yielding under foot at the same time that it piles on above. In large bins two or more ropes could be provided.

In warehouses to which many persons have free access the ropes should be provided; the cost would not be considerable. When admittance is strictly denied it would, perhaps, be needless to provide any safeguards inside the building. I have not seen, in elevators, appliances intended to save life, and would like to hear from others who know of such, or who have any suggestion to make or plan to offer.

Very truly, E. H. VAN Z.

THE REGULAR DEALER AND RECEIVERS.

Editor American Elevator and Grain Trade:—The stand taken by Cincinnati receivers against irregular shippers, is right in line with the action advocated by the AMERICAN ELEVATOR AND GRAIN TRADE, and deserves recognition by every regular country dealer that can conveniently ship to that city.

The custom of dealers at grain centers sending buyers through the country to buy grain direct from the farmers is directly opposed to the interests of the firm so doing, and detrimental to the trade of the grain center in which the firm does business.

It is detrimental to the firm because, by sending out buyers it antagonizes the regular dealers by reducing the business of the regular dealers at stations where it buys. The regular dealers ship grain the year around, and you can depend upon it that they will never ship a bushel to a firm which thus reduces their business. Neither will a regular dealer permit a brother dealer to ship to such a firm if he can help it.

A city firm sending out buyers places itself on a level with the scalpers in the estimation of all responsible country dealers, and must expect to be shunned by them. Scalpers have no regular place of business or business

standing. They buy wherever they can make a trifling profit. Having no rent or taxes to pay on elevator or other grain handling property, they have few expenses and can do business on a smaller margin than the regular dealer. The relation of the scalper to the regular dealer is the same as the traveling peddler to the regular storekeeper. The scalper is eternally looking about for some one to beat, and loses no opportunity. Many receivers at central markets know this to their sorrow.

If a responsible firm of a grain center should establish an agent at a country station and keep a representative there, little objection could be raised. The other dealers at that station could not be expected to ship their grain to the firm so establishing an agency, and in many cases the firm will lose business in that way. Regular dealers at other stations are not so likely to shun the firm establishing permanent agencies as those sending out agents on purchasing trips, because they know that the probability of their business being interfered with by the establishment of a permanent agency by the same firm, is small. It is the rule the world over, and, rightly so, that one person will do naught to increase the business of another who does aught to decrease his business. All regular dealers are prompted by the sense of self-preservation to do all in their power to annihilate scalpers and firms sending out agents. As a firm increases the number of its agents, so must it expect its shipments from regular dealers to be reduced.

Such action is detrimental to the trade of a grain center because it drives shipments to other centers. If every Cincinnati firm would send out agents to buy in competition with the regular country dealers, some of the regular dealers would organize and establish a permanent agent at Cincinnati to receive their grain the year around. The firms sending out agents would have grain to handle only when their agents were out buying. The rest of the year they would be idle. Firms at a distance from Cincinnati that could just as conveniently ship to other centers, would do so in preference to shipping to Cincinnati firms who were making inroads on their part of the grain business. The less number of agents sent out by Cincinnati receivers, the greater would be the city's grain trade.

Agents, as a rule, are sent out only during the busy period, the time when the country dealer has an opportunity to make up for the loss incurred by keeping open house during the dull season. The sending out of agents by firms at central markets is an open declaration of war upon the business of the regular dealer, and will not result in advantage to the firm in the end.

The country grain dealer's business is to buy grain of the farmer and ship it to the grain centers. The receiver's business is to take that grain and sell it. Each branch of the business is distinct in itself, and no firm can expect to do both during the busy period, and one the entire year. Suppose country dealers should establish agents at grain centers to handle their shipments for them during the busy period, what would the receivers at that market do. This would be declaring war to annihilate receivers, and of course they would do everything in their power to prevent the success of the country dealer. It is as fair for the representatives of one branch of the trade as of the other to enter the domain of the other. If receivers want their branch of the grain business to themselves let them keep out of the territory of the regular country dealer who gives them business the year around, and let them do all in their power to keep others from interfering.

Regular country dealers have strong organizations in different parts of the country, and many of them have a tacit understanding that they will work together against all irregular buyers, so receivers sending out agents cannot expect to escape their just rewards. The receivers who declare against irregular dealers will show themselves to have the interest of the regular dealers at heart, and will receive more than thanks for such action—their business will surely be increased.

Buying from farmers is suicidal in itself, as it assists him to do away with the country dealer. His next step will be to do away with the receiver.

Very truly,

SUBSTEFF.

Kansas will produce about 200,000,000 bushels of corn this year, if no unforeseen calamity overtakes the crop.

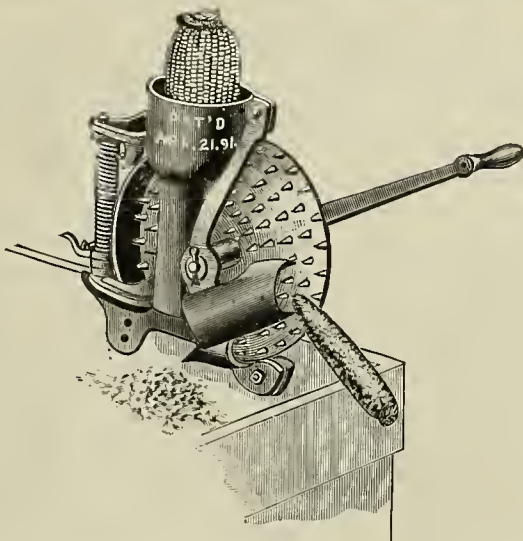
The commissary general of the army recently refused to approve grain contracts made by the department of Texas. The bid amounted to more than \$400,000, and the commissary general thought it too high. The contractors had already bought grain for future delivery, and will probably profit by the rejection of their bids.

WHIP-SAWED ON OATS.

Two years ago, says a Joliet correspondent of a Chicago daily, we had a large crop of oats. Farmers glutted the market and sold for about one-third they would had they held them over. Last year we had a small crop. Farmers held their oats and refused double the price they can obtain now. This year we have a large crop and farmers are doing as they did two years ago. They get "whip-sawed" all the time by doing just the reverse of what they should do—sell when grain brings a good price and withhold from the market when prices are low, without reference to the supposed crop raised. Last year they refused to sell when there were only about 9 cents between the price of corn and that of oats. This year they are selling them when there are more than 30 cents difference. They are now selling them delivered in Chicago for about \$17.25 per ton. About the price they should and often do get for good hay. The readiness with which the foreign markets this year respond to the Chicago market's advances shows that Chicago can dictate prices if the farmers will only assist them by not glutting the market.

THE CYCLONE CORN SHELLER.

The Cyclone Corn Sheller, illustrated herewith, is manufactured by the Garry Iron and Steel Roofing Company of Cleveland, O. It is small, but its makers claim that it



will do more work than some shellers which are much larger. They claim to have succeeded in overcoming the frequent clogging and choking, which is a serious objection to many shellers now in the market.

Every part is made strong enough to stand all strains that it would be likely to have, but if any part gets broken the sheller can easily be repaired at small expense, as all parts are made in duplicate, and kept in stock. Each machine is warranted for five years, provided it is used in the proper manner. It is cheap and effective, seldom gets out of order, and does good work, leaving no corn on the cob.

PROTEST AGAINST SHORT WEIGHT SHIPMENTS.

At the recent meeting of the Dominion millers at Toronto Mr. W. H. Meldrum, talking on the subject of short weight shipments from elevators, said: "This matter comes before every miller who brings in wheat by the cars. There is nothing, perhaps, that causes so much annoyance. We buy wheat in our own locality and experience no difficulty of this kind. But when we buy outside there is difficulty. When we buy wheat we expect to get the wheat we buy. When one finds a shortage of 25 or 30 bushels of wheat in a load of 4,000 or 5,000 bushels, it is too much. In the case of Manitoba purchases there has been trouble. On wheat brought from Owen Sound on every car the shortage will be at least two bushels. I have tested the matter carefully in case of shipments from Owen Sound, Toronto and other points, and have had the inspector from Belleville inspect the shipments, and with the results stated. I know that with grain dealers this is a sore spot, but the matter has got to be faced."

Mr. Jno. Brown referred to the movement now under way in Toronto to appoint an official grain weigher, and he suggested having a like officer in Peterboro'.

Mr. D. Plewes recommended that in case of purchases made through the central buyer, that when the practice of shipping short became fixed on any shipper, that Mr.

Watts be instructed to buy no more wheat from that man.

Mr. J. L. Spink: This is a many sided question, and there never will be a remedy. If you load 500 bushels from Owen Sound or from Peterboro' on a windy day it is bound to be several bushels short. There is not a car that does not lose at least one bushel by the wind.

Mr. C. B. Watts told of a man who sent \$20 back because he had an overplus. If shortages are to be reported then the case of overplus must be reported too.

Mr. T. Hayne said that to have the out turn guaranteed would work the other way too. His experience had been with both grain men and millers, and he would not guarantee the out turn to any one. He told of certain shipments of grain that were reported short several times. The first, second and third time the shortage was promptly paid. On the fourth occasion the reported shortage was 27 bushels—it had been growing bigger with each shipment. It is needless to say it was not paid—the trick had become too transparent.

Moved by David Plewes, seconded by W. H. Meldrum, and carried, that millers finding shortages in cars of wheat purchased from local warehousemen report the same to the central buyer, who shall bring the case of any grain dealer systematically having shortages before the advisory committee who, on notification, should have power to direct the central buyer to purchase no more wheat from such person until he has made good all shortages.

ILLINOIS EXPERIMENTS WITH WHEAT.

Trials for three years indicate that variation in quantity of seed between one and two bushels per acre has less effect on yield than other conditions. In 1891 the largest yield was from six pecks per acre; in 1890, from four and eight pecks; in 1889, from five pecks.

In 1891 sowing small kernels gave a larger yield than was obtained from the same weight of larger kernels; but less than from the same number of larger kernels. The kernels in the crop from the small seeds were approximately as large as those from the larger seed.

In two trials no injury resulted from rolling drilled wheat soon after sowing.

The yields of five plats, sown at intervals of ten or twelve days, from September 2d to October 12th, were all good. It is not certain that they were affected by the date of sowing. If the last sown plat be excepted, there was no appreciable difference in time of ripening, and very little including it. The quantity of straw and the number of stalks per square foot decreased from the earliest to the latest sowing. The average length of heads and weight of kernels increased from the first to the last, except in the case of the second sowing, which was better than the third. In view of danger from the Hessian fly and of undue growth of straw, very early sowing is not advisable; and the danger to late sown wheat from repeated freezing in winter or early spring makes it unsafe in this latitude to sow in October.

Covering wheat one inch deep gave better results than covering three inches, and much better than covering five inches.

Trials with various commercial fertilizers on wheat indicate that on the soil of the Station grounds such use is not profitable. Barnyard manure invariably produces a noticeable effect. Trials at Flora, Odin and Nashville show a marked increase of yield from use of barnyard manure; also some increase from the use of superphosphate of lime, but, in general, not enough to make its use profitable. At Belleville neither barnyard manure nor superphosphate produced any considerable percentage of increase in yield. In view of the results in former years, trials on a small scale of superphosphate of lime and cattle tankage are recommended for wheat on the light-colored soils of Southern Illinois. The value of barnyard manure for these soils can hardly be overestimated.

Trials of twelve varieties of English cross-bred wheat and of two varieties from France indicate possible value from some, with, however, a probability that all will mature too late to be very desirable in Illinois. A trial of a promising new variety of spring wheat from Canada, as was to have been expected, did not give promising results here.

In experiments with wheat and chess, where wheat only was sown no chess was found. Where both were sown both grew. Where chess alone was sown it produced a large crop; and, although carefully harvested, it seeded the ground thickly for the next year. Spring-grown chess grew vigorously but produced no seed.—*Bulletin No. 17, Illinois Agricultural Experiment Station*

LEGISLATIVE REMEDIES UNRELIABLE.

As far as possible every farmer in North Dakota ought to build a granary or storehouse of some kind to hold at least a part of his crop of wheat. The chattel mortgage fiend does not have a clutch on every field this year, and those farmers who will store their own grain instead of rushing it off to the elevators, will save the cost of the granaries in the advanced price that will surely follow any general adoption of the plan. All over the country the farmers are promising to band together to protect themselves, and in no other state does a greater necessity for some such action exist than here. From the experience of the past it is believed that no farmer legislature can be relied upon to remedy any one of the abuses that have grown up with the present grain marketing system in force in this state. The only protection for the present must come from as near a united action of the free farmers as is possible to get. One year of such opposition will do more to secure for wheat growers of this region the legitimate value of their crop than all the local legislation that can be devised by the present population of the state.

—*Jamestown Alert.*

THE ORIGIN OF THE "WHALEBACK."

The inventor of the whalebacks is Capt. Alex. McDougall. Not many years ago he was master of a vessel on the great lakes, at work for the ordinary salary of a captain. While he was thus at work, and for something like the last twenty-five years of his life, he was planning in his mind and in his workshop at home the peculiar ships which his fellow-townsmen now declare, in an official guide book of the city of Superior, Wis., are turned out eighteen a year, from the largest shipyard in the world.

Capt. McDougall had all of the average inventor's trials and troubles in his efforts to start as a shipbuilder. He had saved a few thousands of dollars, but they were a drop in the bucket of his needs. In 1886 he got the promise of financial backing from several persons in Duluth, but the arrangement fell through. In 1887 he secured financial aid from Capt. Thomas Wilson of Cleveland, a shipowner, and from a Duluth grainman, A. D. Thomson. They started a little shipyard in Duluth and began work in December, 1887, with only one experienced assistant, a Robert Clarke, who had had experience as a shipbuilder on the Clyde and elsewhere. The conical ends—bow and stern—for the first boat were made in Wilmington, Del., and were not satisfactory. The result was that the first boat would not steer well. The boat, only a 1,200-tonner, was a great curiosity, and was dubbed "a cigar boat," "McDougall's pig," and "a whaleback." The last nickname stuck.

Joseph L. Colby, then president of the Wisconsin Central Railroad, gave to Capt. McDougall a letter of introduction to Colgate Hoyt of New York, who soon convinced himself that the new boats offered a great chance to make money. As a result of his approval of the inventor's plan there was formed the American Steel Barge Co., with half a million capital, with Hoyt for president, Colby for vice-president, and McDougall for manager. Among the stockholders were John D. Rockefeller Colby, Capt. Wilson, Capt. McDougall, and A. D. Thompson. Joseph Kidd, from John Roach's yard, became superintendent, and the shipbuilding took a great spurt, the yard being the scene of activity of many experienced mechanics.

There was need for more room than the yard took up in Duluth, and in competition with the cities of Cleveland, Chicago, Buffalo and Duluth, the little city of Superior, opposite Duluth, carried off the works by giving a splendid yard site on Howard's pocket, an arm of the Bay of Superior. Docks with room for the building of eight vessels at a time were constructed there and the present great works were established. The capital stock of the company swelled to \$2,500,000, with an understanding that it must soon be doubled. Eighteen ships are turned out there annually. The project of establishing another yard in New York harbor has been abandoned, but two ships are to be sent around the Horn to engage in traffic on the North Pacific coast, and it is said to have been decided that a shipyard shall be established on Puget Sound for supplying ships for the coal and lumber trade on that coast.

Capt. McDougall's plans began with the idea of a navy

of mere barges to be operated as trains of cars are, each gang being trailed along behind a tugboat. Then came the idea of applying their own motive power to the barges as in the case with the one which has just returned from Europe. Now it is said that McDougall talks of building self-propelling whalebacks to carry 10,000 tons of freight, and also of building passenger boats that will follow the whaleback model, carry 2,000 passengers, and beat the old-style ships in speed and the convenience and comfortableness of the passenger accommodations. He often dreams of whaleback men-of-war.

The hull of the whaleback—or that part which rests in the water—differs only slightly from the old type of hull. The new features are the ends and the doing away with upper works by turning the sides over to meet in a sort of turtle-back form. The ends taper off gradually, and reverse the old theory that a vessel's bow and stern should be high above water. They are better submerged, McDougall thinks, and so when a whaleback is in a rough sea she is practically all submerged, and the waves roll over her without meeting with resistance. Then, again, the bow and stern are made as they are to avoid the weight of the old-style ends, which, it is said, strain and weaken all boats which carry them. It is said that in the roughest storms on the lakes no whaleback has been obliged to seek a harbor.

THE GRADING OF RUSSIAN WHEAT.

In a recent report Mr. T. B. Sandwith, British Consul-General at Odessa, says: "In my last report I described at some length the elevator which the Southwestern Railway Company was erecting outside Odessa, about seven miles from the port, and which was to have been completed by the middle of August last. It was constructed in two parts, a building to contain the driving power being placed midway between them. Unfortunately, one of them was burnt to the ground just before completion, but it is rising from its ashes and is expected to be ready in June. The uninjured half is divided into 240 bins capable of storing 58,000 quarters of grain, and since August last it has been used as a corn magazine. Of course, the most rational course would have been to build elevators in the port where steamers could come alongside and take in grain direct, as in America, without further expense; but this arrangement would have done away with the necessity of the high level railway in which a large amount of capital is invested.

"It was known that the government had furnished the capital for this and the smaller elevators scattered along the Southwestern line of railway, in the expectation that the company would have utilized the machinery thus placed at their disposal for grading the wheat consigned to them; the main object the Minister of Finance had in view in sanctioning their construction being the introduction of a general system of grain inspection for classifying and grading Russian grain. The primary object of such a system is undoubtedly that of gradually raising the standard of Russian grain in the foreign markets, thereby placing the country generally on an equally advantageous footing with the other great corn-producing countries. In the present uncontrolled conditions of export, Russian grain is placed on foreign markets at a decided disadvantage, owing to its being exported in parcels made up to suit particular samples, which are always open to dispute on their arrival at the port of destination, whereby the intrinsic value of the grain is considerably lowered, to the evident loss of the grain producer, and therefore of the country at large. The first step in a necessarily long series of reforms is to introduce the classification or grading of wheat by government officials and boards of grain inspection, the members of which would be appointed by the government, the zemstvo (county council), and the exchange committee (chamber of commerce). The duty of these officials would be to classify the grain in different districts, and to take means to insure its being exported under the different boards of inspection.

"The effects of such a system would be most beneficial: First, the producers anxious to obtain the higher grade for their grain would have a motive for improving their cultivation, would avoid the mixing of seed and send their produce to the nearest elevator to be cleaned and sorted before submitting it to the government inspector for grading. Second, the grain once passed by the inspector would lose its character of private ownership, and would be conveyed to the nearest seaport in bulk

along with other grain of the same grade, be stored in separate bins and shipped under the control of the same boards of inspection. Third, the foreign markets would, in time, gain confidence in the uniform character of certain grades, and purchase any shipments of such grain at their market value. By these means grain would be produced in more uniform qualities; each sort or grade would be absolutely homogeneous; the handling and transport of grain would be enormously simplified. The opportunities for dishonesty, which exist at all the ports of export, would be fewer, as the grain would not necessarily change hands or suffer deterioration by liability to mixture or by short weight. These advantages alone are sufficient to induce the Minister of Finance to use all the means in his power to introduce grain inspection, but I am led to understand that his views are even more far-reaching. After a certain lapse of time, when elevators have sprung up at all the principal ports of export and along the lines of railway, with grain inspectors at each point to control and classify the grain brought to the station elevator, not only the wealthy landowner, but the small farmer and peasant will be able to bring their wheat to the elevator to be there classified and graded, receiving for whatever quantity they have brought a warrant for so much grain of a certain grade. Such warrants being payable at all the government banks will enable the producer to obtain the actual market value of his produce without having recourse to the middleman, who, while taking advantage of the peasant's ignorance of the real value of his produce, forms only the first link in a chain of middlemen, through which the grain is passed before it is shipped for its destination.

'Such are the enlightened views of the eminent man who has already done so much to raise the financial credit of his country, and he must be aware that in advocating them he is entering on a gigantic struggle with an army of keen, unscrupulous middlemen, who enjoy a practical monopoly of the grain trade of Russia. No men of business on the spot, conversant with the trade and acquainted with the inherent difficulties incident to its operations, can be sanguine of the speedy overthrow of the present system. But the Minister of Finance was dissatisfied with the working of the Odessa elevator, which is but an ordinary grain store called an elevator, and only built to enable the company to legalize their position for the sale of grain, and occupy themselves with business not provided for in their statutes. He has accordingly appointed a commission to inquire why a system of grading has not been already introduced. His well-known energy warrants the expectation that his scheme will effect something toward liberating the tiller of the soil from the meshes of a system of extortion and chicanery, which diverts the profits of husbandry from the industrious peasant into the pockets of the crafty middleman and the calculating speculator."

HOW TO BUILD ELEVATORS.

The lifting side of elevators, writes J. L. Owens & Co. of Minneapolis, should be perpendicular, or in other words, the face of pulley on head shaft should be in line with face of pulley in boot. The pulley in head should be three times as large as the pulley in boot. The revolution of the shaft in the head of elevator should be 43 revolutions per minute, regardless of the size of pulley, when the pulley is 36-inch diameter or over, and where round bottom seamless steel bucket is used. Square cornered buckets with flat backs and pointed bottoms will not deliver at this speed of belt. The head or discharge action of elevator is well illustrated by the boyish trick of whirling overhead a pail full of water. If the speed is great enough no water will spill; if not just right, the water will drop out. The speed of elevator can be so great that no grain will be discharged.

The elevator leg should be built straight on the lifting side, and so large that the belt or buckets cannot strike the wood under any circumstances. The back leg should be belled or sagged to suit the sway of belt, and so arranged that the bucket or belt will not strike coming down the back leg. The material should be fed into the boot on the front or lifting side at the center of pulley, not under the pulley. If necessary, can feed into boot at sides and in rear; but if at sides, feed low; if in rear, low as possible, so the material will not pack back of bucket, which causes bucket to stand out from belt, strains the belt and wears holes in belt.

Lack of cars to haul the great wheat crop to market is a cause of general complaint throughout the West.

Trade Notes.

Always the world over, this magical word
The coffers of wealth opens wide;
Its power extends where language is heard,
For ages its usefulness tried.
A man who once uses it, if with good sense,
No other plan ever he tries,
But sticks to it close, gathers dollars and pence—
READER—
“Why don't you advertise?”

Peter Provost of Minneapolis has patented a new grain scorking machine.

Herkner & Stine, manufacturers of leather belting at New York City, have been succeeded by J. R. Stue & Co.

W. S. Bell & Co. of Minneapolis, Minn., dealers in mill and elevator supplies, have been succeeded by G. W. Crane & Co.

Jones Scale Works at Binghamton, N. Y., are being enlarged by the addition of another story to the main building, and the building of a foundry 160x60 feet, a forge shop 60x40 feet, a boiler room 60x50 feet, and a storehouse 75x60 feet.

Mexican importers of American machinery complain of the failure of manufacturers to print in Spanish the instructions for putting the machinery together. The purchasers don't understand the English terms employed, and therefore prefer to deal with European manufacturers, who furnish their customers with Spanish instructions.

To design and place advertising in the best way is called “The Art of Advertising.” Experience has resulted in a general consent to some few particulars of this art—such, for example, as the necessity of a careful wording and display of the advertisement and the best papers to reach the class for which the advertisement is intended. Outside of these particulars no general rules for guidance have been agreed upon.

Scarcely any person will read an advertisement the first time he sees it with sufficient care to remember much about it, unless he is in some way interested in the article advertised; hence the fate of an advertisement that appears but once. It is glanced at, seen but once, and then, with a very few exceptions, is comparatively forgotten; while an advertisement placed in each issue of a paper for a year is almost bound to impress itself upon each reader before it expires.

In order to make advertising productive of satisfactory results, the advertiser must endeavor to bring the merits of his wares before the consumer at a time when he is really in need of the article advertised. The exact time at which a man is likely to become a purchaser is something that cannot be determined by one advertiser out of a hundred; there is, however, one and only one means by which to be sure of being on hand at the right time, and that is to be there at all times.

E. H. Pease Manufacturing Company, Racine, Wis., say: “Trade prospects are splendid, and were never better than now. We are having a sale of farm fans through implement dealers as large as any previous year, and are having the largest sale we ever had of warehouse mills, separators, oat clippers and general grain elevator machinery and fittings. Collections cannot help being good. Look at the immense crops and immense prices! Farmers should get out of debt this year, or they are no business men.”

The James Leffel & Co. at Springfield, O., manufacturers of improved upright and horizontal engines and boilers, inform us that, notwithstanding depression in some other lines, trade in their steam engines and boilers and turbine water wheels continues very good. The outlook is favorable, and they expect to maintain an average at least a little ahead of last year's. A good trade has been enjoyed for grain elevator work through the West and North. Throughout the South the company have recently disbursed shipments aggregating several carloads of engines and boilers.

Repetition in most things is common in every-day life. It begins with the child who, when its request is not at first granted, continues to ask, and by the continued asking in many cases, perhaps a majority of them, obtains that for which it seeks. The lawyer who continually strives to impress upon the jury the fact that his client is innocent oftentimes by the mere repetition persuades it that this is a fact. The auctioneer, by his repeated “go-

ing! going!” induces a higher bid for his goods. Now, if what has been said is true, it follows that repeated announcements will impress the value of an article, its use or necessity, more upon readers than a single one.

VALUABLE BOOKS FOR GRAIN DEALERS.

The following standard works will be sent, postage paid, on receipt of prices given:

ROBINSON'S TELEGRAPH CIPHER.—The publishers have recently revised this excellent work, and we are now prepared to supply the trade. Cloth binding, \$1.50; leather.....\$2.00

CLARK'S VEST POCKET GRAIN TABLES.—A very useful and handy little book for grain buyers; to be used in reducing to bushels any quantity of grain or seeds up to 100,000 bushels. Size 2½ by 8½ inches, 16 pages, leatherette, 75 cents. Leather binding.....\$1.00

SHORPELL'S MODERN HOUSES.—This large volume contains designs for more than four hundred and fifty dwellings, including cost, size of structure and size of rooms, materials, height of stories, and is illustrated with 1,500 engravings. Printed on good paper and well bound in cloth. Price.....\$5.00

GRAIN DEALERS' AND SHIPPERS' GAZETTEER.—A new publication containing the grain inspection rules for the states of Illinois, Wisconsin, Minnesota, Michigan, Ohio and Missouri, and a complete list of the names of grain dealers and shippers on twenty-five railroads which penetrate the principal grain growing territory of the country. The names were collected recently by the aid of the railroad companies, so the names of no retired firms are given, making it reliable and by far the best book of the kind published. It is well bound and contains 370 pages. Price.....\$5.00

THE MARKET REPORTER.—This neat little book is just the right size to fit your vest pocket. It is published every three months, and contains much information that you need every day in the grain business. It contains the highest and lowest price for grain and provisions each year for twenty-eight years on the Chicago Board of Trade, also the opening, closing, highest and lowest prices by months for the six months preceding. It also contains much miscellaneous information about elevators, inspection, exports and crops that is of value to grain dealers. The stock exchange markets are given and a business diary for three months. Price.....50c.

CLARK'S GRAIN TABLES.—This work is published in several different forms, for use in different lines of business. In these tables pounds are reduced to bushels, so that a buyer can quickly determine the correct number of bushels in a load without doing any figuring. Their use effects a saving every day of more than time enough to pay for them. The edition intended principally for reducing team scale weights to bushels contains nine tables, and is bound in paper. Price 50 cents. This will be found invaluable to country buyers. A new edition, intended for shippers and commission merchants, reduces any quantity up to 64,000 pounds to bushels. It contains sixteen tables, and is neatly bound in leatherette. Price.....\$1.50

CLARK'S DECIMAL GRAIN VALUES.—A series of tables for instantly finding the cost of any number of pounds at any possible market value per bushel, also reducing pounds to bushels on the same page. It is the design of this work to show at a glance, or with the simplest calculation, the cost of any quantity of grain. The method adopted is the result of careful study and is a novel and original combination of decimals in type of differing faces, by which the great number of calculations necessarily involved are presented in a clear, concise and comprehensive manner. Values are shown directly from pounds, without reducing to bushels, while for convenience, where it is necessary or desirable to indicate the quantity by measure, the equivalent bushels and pounds are shown upon each page. The range of prices covered by the tables is for oats 10 to 70 cents per bushel; for corn, rye and flaxseed 10 to \$1.10; for wheat 30 to \$1.50, and for barley 20 to \$1.50. The book contains 90 pages, is well printed, and bound in half morocco. Price.....\$7.50

For any of the above, address

MITCHELL BROS. Co., 184 and 186 Dearborn street, Chicago, Ill.

Extortionate charges have compelled farmers in Tulare County, Cal., to abandon the railway and resort to mule teams for transporting their wheat to San Francisco.

Queries and Replies.

Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.

No. 9. *Buckwheat a Specialty.*—In answer to Query No. 5 of a miller asking the address of some dealer who makes a specialty of buckwheat, would say, we make a specialty of buckwheat.—BECKER & Co., Central Bridge, N. Y.

No. 10. *Book on Wheat Varieties.*—In reply to A. L. Leutz of Treichler's, Pa., I would say that I think there is no comprehensive work published on the different varieties of wheat produced in the United States. By writing to the different state agricultural experiment stations he could get much valuable information on the subject.—CENTRAL.

No. 11. *Power Transmission.*—In No. 7 of “Queries and Replies” “X” wants to know how he can transmit power after moving his engine around so that its shaft will be at right angles to the shaft in the cupola which drives five elevators. I would suggest that a rope transmission be used. Use manilla rope running over grooved iron pulleys. The rope should be stretched by a tension carriage to take up the slack.—J. McK.

FUTURE SELLING.

The buying and selling of grain on contracts for forward delivery is responsible for higher prices than would otherwise obtain in the general markets and narrows the cost between the farm and factory to the lowest possible point. There is no business, perhaps, with sharper competition between dealers than that of grain buying when the railroad companies show no favors. In the past many railroads did give favors under the obligation, they claimed, of “protecting our people,” giving rebates, the preference in cars, and in many ways harassing competitors. That is gone, leaving markets open to any that decide to enter them. One reason of the prosperity of elevator companies as against individual buyers is that as fast as they buy wheat in the country they sell it at once by contract for forward delivery in the place they usually ship to, an equal amount, thereby practically selling it as fast as it is bought. The small buyer is more often a holder on speculation, and usually the loser by it in the end. In other ways the elevator companies practice rigid economy. It is in such economy and in the security afforded by the future sales that the secret of the whole elevator prosperity lies. The practice of the greatest economy does not call for the employment of the cheapest help. It more frequently demands high salaries that will secure the brighter experts. That is a part of the economy of the management. If the grain is sold at once after being bought, the margin between the buying price and the selling price is saved. If it is no more than a quarter of a cent a bushel, it helps to make up the aggregate that measures the year's prosperity. It would be practically impossible to handle grain as cheaply between the producer and the consumer if there were no system of “future selling.” There was a time when grain was handled without the protection of future sales, but a big margin was always allowed for the risk.—*Minneapolis Market Record.*

WHAT MADE THE WHEAT SMELL?

In a Missouri mill the other day we heard the following in regard to what sometimes makes wheat smell: A farmer sold his wheat, which, by the way, was a two year-old crop, for 103 cents per bushel. When the wheat was delivered the miller detected that peculiar odor common to old wheat that had not been exposed to the air at intervals of reasonable length, and as wheat had declined to 93 cents per bushel, the miller refused to receive it. This “riled” the farmer, because he thought the wheat all right, and so he took a sample to a St. Louis grain commission man and asked him to examine it. The commission man pronounced it just a little “mow burnt,” and asked the farmer what the miller had agreed to pay him for it. “A dollar and three cents,” said the farmer. “Oh!” said the commission man, “if I had agreed to pay that much for it I could smell it at ten feet against the wind.”—*St. Louis Miller.*

DOTS AND DASHES.

Corn husks are used in the manufacture of paper.

The frost damaged the wheat crop in North Dakota to some extent.

New York has 36,000 acres in hops this year, promising 90,000 bales.

Philadelphia exported more than 2,000,000 bushels of wheat in August.

San Francisco sent out 259 wheat-laden vessels during the cereal year ending June 30, 1891.

The recent rise in wheat was a puzzle to the speculators, and as a rule they made nothing by it.

Secretary Mohler's crop report for August places the yield of oats for 1891 in Kansas at nearly 40,000,000 bushels.

Grain rates from the Texas wheat regions to Galveston have been fixed at 17½ cents by the State Railroad Commission.

Gen. R. S. Dyrenforth takes credit for producing six rains in three weeks in Texas. This is claimed to be a proof of success.

Russia's nkase forbidding the export of rye caused that cereal to advance in price until it was dearer than wheat in Europe.

Eight glucose companies have joined in a trust to increase profits, cheapen production and possibly increase prices to consumers.

A car of oats was broken open at Columbus, O., Aug. 22 by three men, who were arrested later. The stolen oats, 50 bushels, were recovered.

The greatest wheat crop hitherto in the United States was in 1884, 512,000,000 bushels. This year breaks the record both in quantity and quality.

Canada's wheat crop will amount to 55,160,000 bushels, according to the estimate of the Canadian Millers' Association. Two-fifths will be exported.

San Francisco recently received 5,228,000 wheat bags and 4,115 bales of jute in one cargo from Calcutta, one of the largest cargoes imported at San Francisco.

The largest grain cargo ever shipped from San Francisco in a sailing vessel was 112,597 centals of wheat, which the new American ship Shenandoah sailed with Aug. 1.

A train carrying 25,000 bushels of wheat was received at Chicago Sept. 2 from Guthrie, Ok., via the Santa Fe Railway. It was decorated with a view to advertising Oklahoma.

Two thieves, a man named Lyons and his son, have been stealing wheat at Omaha from cars of the St. Paul, Minneapolis & Omaha Railway. They were arrested and the grain recovered.

New Orleans exported, according to the grain inspectors' report, 996,898 bushels wheat and 122,379 bushels corn in July, against 107,381 bushels wheat and 807,997 bushels corn in July, 1890.

Grain exports from San Francisco during July were very heavy. Not less than thirty-one vessels left for foreign ports, six of them going to South America, an unprecedented circumstance.

Smudges are made by farmers in the Northwest to protect their wheat from frost. Some such experiments have been successful in their results; but sometimes a light breeze blows the smoke the wrong way.

Call it gambling, speculation, or what you may, C. A. Pillsbury's wheat deals have always tended to encourage a higher price for North Dakota's wheat crop—and that's a pretty good kind of a man for North Dakota.—*Fargo Republican*.

Wheat graded by Kansas inspection seems to compare favorably in Eastern markets with wheat graded by the inspection of other states. By keeping up grades the Kansas inspectors will greatly benefit wheat growers in their state.

Baled hay has been used for the secret shipment of arms and ammunition from San Francisco to Chili. Large quantities of cartridges have been concealed in the bales and shipped out, notwithstanding the great care exercised by the customs officials.

The winter wheat crop in Ontario is far above that of 1890. The average yield is estimated at 24.4 bushels to the acre, against 19.8 last year. The spring wheat is ex-

pected to produce 18.8 per acre, or six bushels more than last year. A trustworthy estimate puts the total yield for Canada at 62,000,000 bushels.

Ontario has 241,086 acres in wheat and 107,879 acres in buckwheat this year, against 223,836 acres wheat and 90,111 acres buckwheat last year, and against 187,932 acres wheat and 64,577 acres buckwheat, the average for the eight years after 1882.

A machine for picking hops has been invented. The branches of the hop vine are fed into a receiver and are seized between two rollers and gradually pulled through. The hops fall into a box, and the vines and leaves are thrown into a separate pile.

A new process for making fiber from flax and wheat straw, known as the Hickman Tower Process, will be tested in a pulp mill to be built at Mineral Point, Wis., by Philip Allen, Jr. It is expected that the highest grade of paper can be manufactured.

"This family has been wronged by the railroad company," is the sign a farmer at Fanning, on the Burlington & Missouri River Railway, in Kansas, keeps over the front door of his house. The company had appropriated some of his land, but he was well paid for it.

Many buyers unwittingly give farmers' wagons credit for more grain than they contain, owing to inaccurate scales. The machinery and levers below are not always in a condition to give fairly accurate weights. A careful examination of scales sometimes saves money to the buyer.

AMERICA'S NATIONAL FLOWER.

The United States is still in doubt as to what flower should be adopted as an appropriate national emblem. A pamphlet on the subject eloquently appeals for the maize plant, better known as Indian corn. Why not get a gardener—any working man could do it—to produce by grafting, budding or inoculation, or some other well-known means, a new flower, which should be a combination of the rose, the shamrock, the thistle and the Indian corn flower, and call it the *amazing bloomer*.—*Liverpool Corn Trade News*.

A QUARRY OF PETRIFIED GRAIN.

An absolute quarry of petrified grain, either wheat or barley, has been unearthed near Talmage, Nemaha county, Neb., and is attracting considerable attention. The kernels of grain are perfect in form, but have become as hardened as solid rock and are well matted together. It is with considerable difficulty that one or more of the petrified grains can be separated from the body of a chunk. It is a pretty stone or composition, or whatever it may be called, to look at, and with a few finishing touches would make a very ornamental material to be used on a building. J. H. Thompson of the Chicago Lumber Company says that the people in the vicinity of the quarry are using the stone for all sorts of building purposes. Specimens of this discovery will be placed on exhibition at the World's Fair.

THE BAG TRADE OF THE PACIFIC COAST.

For quite a number of years past the immense trade in jute bags from Calcutta has been handled entirely from San Francisco, that being the nearest point to Calcutta from which there were regular shipping facilities. However, since the inauguration of the Canadian Pacific fast line between here and the Orient, all this is changed, and by a practical experiment it has been proven that the business can to a large extent be done from here. There are now en route no less than 100,000 jute bags imported direct from Calcutta by Steves, Burpee & Co., who with commendable enterprise have taken the initiative in this matter. They have bought their supply direct, and are now selling throughout the country. At no very distant day the trade in these bags will be a most important one, for from Vancouver the whole of the Northwest and Manitoba supply can be handled. The shipment now on the way for Steves, Burpee & Co. is the first one to this point, and it is to be hoped it will be followed by others. In order to store this large quantity in bond, the firm above mentioned are now having built a bonded warehouse on their own premises so that the expense of outside storage may be saved.—*Vancouver World*.

Fires, Casualties, Etc.

A prairie fire destroyed large areas of grain and hay in Faulk Co., S. D., Aug. 29.

The Hollencamp brewery at Xenia, O., was damaged by fire Aug. 1. Loss \$10,000; insured.

The grain elevator of L. C. Duke at Colfax, Ind., was burned at 2:30 A. M. Aug. 24. Loss \$4,000.

Schubert's brewery at Half Moon Bay, Cal., was burned Aug. 3. Loss \$8,000; insurance \$4,000.

Evert Wells had his hand caught and torn in the cog wheels of an elevator at Plain City, O., recently.

The Missouri Distilling Company of St. Louis suffered a loss of \$20,000 by fire in their warehouse Aug. 18.

The grain and hay warehouse of Lowerstein & Hummcutt at Greenville, Tex., was burned recently. Loss \$2,000.

The Monticello Starch Factory at Monticello, Minn., was burned early in the morning of Aug. 30. Loss \$14,000; insurance \$5,000.

The elevator of Hunting & Co. at Tyndall, S. D., was burned Aug. 30. Loss well insured. The fire is supposed to have been started by an incendiary.

The elevator being added to the Clinton Mill at Buffalo, N. Y., owned by Capt. Thomas Ryan, was completely demolished by a windstorm Aug. 9. Loss \$3,000.

Andrew Carlson, working on the Midway Elevator, being built at Minneapolis, Minn., fell off a scaffold Aug. 27, and died from his injuries four days later.

A grain elevator at Halifax, N. S., was damaged by a windstorm on the night of Sept. 7. A chute several hundred feet long was blown down, and in its fall 400 pigeons were killed.

A grain cargo of 119,000 bushels, valued at \$120,000, went to the bottom of the ocean Aug. 31 in the British steel steamer Dunmurry, which left New York for Antwerp a few days before.

The Union Elevator at Minneapolis, Minn., had to stop running Aug. 25, owing to the breaking of the 6-in. main shaft near the driving pulley, which was also rendered useless by the loss of several spokes.

Otis Peters, 13 years of age, was smothered in an elevator at Arcadia, O., Aug. 19. He jumped into a bin from which wheat was being loaded into a car. He was drawn under the grain and smothered.

William Green, a young man employed on the Farmers' elevator at Neepawa, Man., on Aug. 27, jumped down on a scaffold with such force that it gave way, letting him fall fifty feet to the ground. He died five hours later.

George Anderson, a discharged employe of the Lake Superior Elevator Company at Duluth, on Aug. 24 attempted to shoot George Rupley, manager of the company. The affair took place on the Board of Trade and caused much excitement. Anderson is said to be crazy.

Two hop houses at Sacramento, Cal., were burned recently. One owned by A. Monke was destroyed Sept. 2, with 250 bales of hops, at a loss of \$10,000, with no insurance. The other, on John Merkeley's ranch, was burned Sept. 7, with 150 bales of hops. Loss on hops \$3,000; insurance \$2,000; insurance on building, etc., \$1,800.

B. T. Smith died of suffocation Aug. 12 in his new elevator at Brownsburg, Ind. He went into a bin to clear away an obstruction to the passage of the grain down the spout. His leg was broken in some way unknown, and while thus disabled the grain, which was running in, buried him. Mr. Smith owned a flour mill and had built the elevator only a few weeks before.

The Star Elevator at Minneapolis, Minn., burst Aug. 12, and emptied 75,000 bushels of wheat on Thomas J. Thompson's feed mill adjoining. The mill was crushed, and a fire started from its boilers but did little damage. Loss on mill and contents \$24,000; on elevator and grain \$5,000; fully insured. An English syndicate, the Chicago and Northwest Granaries Company, owned the elevator.

George J. Osborne, superintendent of the Chicago, Milwaukee & St. Paul Elevators at Minneapolis, Minn., committed suicide recently. He walked into the river, put two heavy stones in the pockets of his coat and waded out beyond his depth. On Aug. 21 the body was discovered and two days later identified. Speculation in wheat with the money of his employers was the cause of his ruin. He lost money and could not bear the disgrace that he saw was coming.

The corn acreage, according to statistics from Washington, is 78,000,000 acres, and the prospects are that the crop will be as great as in 1889, when the largest crop ever known was harvested.

LATE PATENTS

Issued on July 7, 1891.

GRAIN ELEVATOR.—Benjamin Seifel, Ckato, Minn. (No model.) No. 455,432. Serial No. 380,888. Filed Feb 10, 1891.

SEPARATING MACHINE.—August Heine, Silver Creek, N. Y. (No model.) No. 455,592. Serial No. 379,643. Filed Jan. 30, 1891.

CONVEYOR.—Hans Birkholz, Milwaukee, Wis., assignor to Edw. P. Allis & Co., Margaret W. Allis, William W. Allis, Edward P. Allis, Jr., Charles Allis and Edwin Reynolds, all of Milwaukee, Wis., executors of Edward P. Allis, deceased, sole member of the firm of Edw. P. Allis & Co. (No model.) No. 455,384. Serial No. 264,925. Filed Feb 23, 1888.

Issued on July 14, 1891.

GRAIN SEPARATOR.—Charles Closs, St. Ansgar, Ia. (No model.) No. 455,997. Serial No. 370,468. Filed Nov. 6, 1890.

GRAIN SEPARATING SCREEN.—Charles Closs, St. Ansgar, Ia. (No model.) No. 455,998. Serial No. 378,445. Filed Jan. 20, 1891.

AUTOMATIC GRAIN MEASURER.—Joseph Dietz, Owatonna, Minn. (No model.) No. 455,744. Serial No. 321,912. Filed Aug. 24, 1889.

CENTRIFUGAL WINNOWING APPARATUS.—Olof Sundgren, Osersund, Sweden. (No model.) No. 455,977. Serial No. 346,519. Filed April 14, 1890.

GRAIN CLEANING MILL.—Lewis Bartholomew, Philadelphia, assignor of one-half to David J. Waller, Bloomsburg, Pa. (No model.) No. 456,077. Serial No. 377,988. Filed Jan. 16, 1891.

BALING PRESS.—Cyrus E. Bates, Bloomington, Ill. (No model.) No. 455,731. Serial No. 381,923. Filed Feb. 18, 1891.

BALING PRESS.—Edward M. Pine, Puyallup, Wash. (No model.) No. 456,057. Serial No. 372,616. Filed Nov. 25, 1890.

Issued on July 21, 1891.

SCOURING AND FANNING MILL FOR CLEANING GRAIN.—Cyrus Russ, Beamsville, Canada. (No model.) No. 456,207. Serial No. 384,729. Filed March 12, 1891.

GRAIN DOOR FOR CARS.—William F. Lyon, Detroit, Mich., assignor of one-fourth to William R. Champney, same place. (No model.) No. 456,381. Serial No. 372,372. Filed Nov. 22, 1890.

CORN SHELLER.—John A. Adams, Salyersville, Ky. (No model.) No. 456,460. Serial No. 388,486. Filed April 11, 1891.

Issued on July 28, 1891.

HAY PRESS.—Charles D. McNeill, Victoria, Tex., assignor of one-half to I. P. Kibbe. (No model.) No. 456,633. Serial No. 337,800. Filed Jan. 23, 1891.

DEVICE FOR OPERATING BALING PRESSES.—David Lostutter, North's Landing, Ind., assignor of one-half to John W. Bunker, same place. (No model.) No. 456,703. Serial No. 384,903. Filed March 13, 1891.

BALING PRESS.—William R. Moseley, Jackson, Miss. (No model.) No. 456,834. Serial No. 373,320. Filed Dec. 2, 1890.

Issued on August 4, 1891.

BALING PRESS.—William G. Tuten, Bonnet, S. C. (No model.) No. 457,173. Serial No. 375,691. Filed Dec. 24, 1890.

BALING PRESS.—Charles T. Anderson, Tampico, Wash. (No model.) No. 457,177. Serial No. 376,440. Filed Jan. 2, 1891.

GRAIN REGISTER AND SACKER.—John Lukaszevic, Custer, Wis. (No model.) No. 457,283. Serial No. 343,592. Filed March 12, 1890.

Issued on Aug 11, 1891.

HAY PRESS.—Benjamin G. Cox, Tulip, Tex. (No model.) No. 457,705. Serial No. 367,282. Filed Oct. 6, 1890.

BALING PRESS.—Peter K. Dederick, Loudonville, N. Y. (No model.) No. 457,631. Serial No. 197,179. Filed March 30, 1886.

BALING PRESS.—Peter K. Dederick, Loudonville, N. Y. (No model.) No. 457,633. Serial No. 213,525. Filed Sept. 14, 1886.

BALING PRESS.—Peter K. Dederick, Loudonville, N. Y. (No model.) No. 457,635. Serial No. 357,825. Filed July 5, 1890.

BALING PRESS.—Milton O. Reeves, Columbus, Ind. (No model.) No. 457,369. Serial No. 394,700. Filed June 1, 1891.

GRAIN SCOURING MACHINE.—Dennis E. Sibley, Chi-

cago, Ill. (No model.) No. 457,380. Serial No. 389,539. Filed April 20, 1890.

HORSE POWER.—John Ambrose and John W. Had-dick, Grenada, Miss. (No model.) No. 457,627. Serial No. 389,850. Filed April 21, 1891.

FUMIGATOR FOR GRAIN BINS.—Thaddeus A. Manahan, Young, Tex. (No model.) No. 457,652. Serial No. 386,132. Filed March 23, 1891.

BALING PRESS.—Peter K. Dederick, Loudonville, N. Y. (No model.) No. 457,636. Serial No. 395,289. Filed Aug. 14, 1886. Renewed June 6, 1891.

BALING PRESS AND METHOD OF BALING.—Peter K. Dederick, Loudonville, N. Y. (No model.) No. 457,632. Serial No. 210,903. Filed Aug. 14, 1886.

WATERWAYS

The proposed Tennessee and Mississippi Canal is being surveyed by a corps of engineers.

Sixty steamers belonging to seventeen regular lines, do business between Baltimore and foreign ports.

Shortages and overruns in grain cargoes loaded at Toledo for Buffalo have lately become less frequent.

A line of river boats will be operated by the people of Chattanooga, Tenn., entirely free from the control of the railways.

The Portage Lake Canal is now in the hands of the government and will be dredged out and otherwise improved without delay.

To accommodate the grain traffic the Canadian canals have been ordered to be kept open during the remainder of the season on Sunday.

Kingston, Ont., also complains of shortages in cargoes from Toledo, O. The Armenia was 80 bushels short in 25,000, and the Grantham was short 70 bushels in 23,000.

At Chicago recently the large schooner Golden Age went aground in fifteen feet of water opposite the Indiana Elevator, and for several hours completely blocked the channel.

The oldest schooner sailing on the lakes is the Racine, 160 tons, built in Cleveland, O., in 1844; and the oldest steamer is the Araxes, 569 tons, built at Buffalo, N. Y., in 1856, according to the *Marine Record*.

The Erie Canal is suffering from low water east of Lockport. It is suspected that factories are secretly taking the water. The Buffalo Merchants' Exchange is about to lend its aid for the betterment of the canal.

The floating elevator, Cyclone, at Buffalo broke down recently while transferring the schooner Benson's wheat cargo. Efforts are being made to drive the Cyclone from her dock on the ground that she is obstructing navigation.

A new breakwater will be built by the government in the lower part of Delaware Bay in deeper water than the present protection, which cost \$2,500,000. The new breakwater will furnish a safe anchorage for vessels drawing thirty feet.

As an example of quick handling the following is of interest: The steamer Majestic arrived at the Evans Elevator in Buffalo, N. Y., at 9:30 A. M., and unloaded 72,000 bushels of wheat and took on board 2,100 tons of coal, besides fuel, before 6 P. M. the same day.

The acting secretary of war has notified the mayor of Chicago that the Canal street bridge obstruction must be removed, and that the Chicago River is a navigable water of the United States. The mayor has hauded the communication to the city council for action.

Work on the Chignecto Ship Railway has been suspended owing to some difficulty in selling its securities. Operations will be resumed when the money market improves. The work is, however, far advanced, the rails having been laid for twelve miles and the line half ballasted.

The Cyclone floating elevator was ordered away from its dock Aug. 18 by the harbor-master at Buffalo. The owners hired two tugs, moved the floater away, towed it back in the old place and were ready for business. The right of a vessel to lie permanently at a dock leased by its owner is the question at issue.

And now the whalebacks are to extend their operations to the Mississippi River. The construction will have to be modified very materially, however, the conditions of river baling being very different from ocean or lake sailing. River boats must draw only a few feet of water, heavy upperworks are unnecessary, and sails are out of place.

Shipments of wheat to Europe from St. Louis by the river route via New Orleans, have greatly increased of late. One steamer can tow three to five boats, each laden with from 30,000 to 50,000 bushels, to New Orleans in six or seven days. On their arrival at New Orleans these boats are unloaded by floating elevators, of which there are three with a combined capacity of 30,000 bushels an

hour. The charge for transferring from river boats to sea-going vessels is one half cent a bushel. Although facilities for handling grain at New Orleans have greatly increased in recent years, more elevators are needed to take care of grain arriving by rail.

The convention for the improvement of Western waterways will meet at Evansville, Ind., Oct. 14 and 15. Governors of states and mayors of cities, and all commercial, trade, manufacturing, mechanical and agricultural organizations, river and seagoing vessels, are requested without further notice to send delegates, number not limited.

Toledo shortages and over-runs are troubling our elevator men again. The Susan Peck over-ran 900 bushels, the Quito 180, Majestic 300 and Wm. Edwards 280. But the shortages are just as numerous, and as several cargoes were reweighed two, and even three times, and found to tally here, it is safe to say that the fault lies in Toledo.—*Buffalo Commercial*.

Slow work and delays have bothered vesselmen having boats loaded at the Illinois Central Elevators in Chicago. The elevator employees apparently fail to realize that time is money to owners of boats, and seem to be in no hurry with their work. The Indiana Elevator, on the other hand, is running to its full capacity day and night. Four houses owned by the Chicago and Northwest Granaries Company, the English syndicate, have been closed. They are the Galena, St. Paul, Fulton and Air Line.

PERSONAL

A. C. Clausen has been re-elected chief grain inspector of Minnesota.

The Nebraska State Board of Transportation has appointed Mr. Taylor chief weighmaster.

Mr. Shaw has returned to Minneapolis and resumed the management of the Inter State Elevator.

Chief Grain Inspector Blanchard of Nebraska, has chosen R. P. Thompson as assistant inspector.

M. J. F. Low, grain inspector at Duluth, has been appointed to take charge of inspection at St. Cloud, Minn.

F. C. Smith will be foreman of the new elevator of P. D. Armour at Chicago, which is to be operated by the Minnesota Elevator Company.

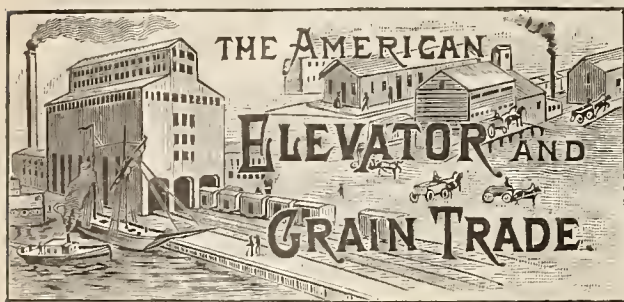
Mr. A. Burlock of the Chicago, Milwaukee & St. Paul Railway, has taken charge of Elevator "B" at Minneapolis, Minn., formerly superintended by the late George J. Osborne.

Robert Sbane, formerly foreman of the Armour Elevator at Chicago, has taken charge of elevators "A," "B," "C" and "D" on the Chicago, Burlington & Quincy Railway, which Philip D. Armour recently leased. Mr. Sbane was well liked by the men at the "Armour," and they regret his departure. His former position is now held by Mr. Hanley.

THE HESSIAN FLY PARASITE.

During the present season a number of experiments have been made in different parts of the United States—thanks to the labors of Prof. C. V. Riley—to test the value of the parasite supposed to be destructive to the Hessian fly. The results obtained by the Illinois state entomologist have just been made known. The experiments were undertaken to determine whether these larvae were destructive to the fly in that state, and if so in what degree. In order to determine this a small patch of wheat about a yard square was inclosed in a box arranged so that the grain could have light and air to grow. A considerable number of Hessian flies and the larvae mentioned were put in and the box so closed that they could not escape and other insects get in, and thus the experiment was begun. The larvae hatched and flourished. They are almost microscopical, and seem to have been created solely to prey upon the Hessian fly. The parasite is a neatly formed, wasp shaped little mite, supplied with a sharp sting or auger. With unerring instinct it finds the place where the fly has laid its eggs under the husk of the straw, and boring down into it, the parasite lays its egg inside the egg of the fly. There it develops into a grub, consuming the egg of the fly and destroying it. This is an outline of what has been proved by the experiment made. The parasite, which is found only in Europe, was first discovered making its depredations upon the Hessian fly in the wheat fields of Southern Russia.

The grading of wheat at this market, on this crop, is better than any other we have compared with. A week or two ago there was complaint of Toledo elevator weights and we now have inspectors of weights at the leading elevators, and we are determined to do all that is reasonably possible to make our market a good one, and an honest one.—*Toledo Market Report*.



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HARLEY B. MITCHELL, - - - Editor.

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., SEPTEMBER 15, 1891.

ANOTHER "HOLD YOUR WHEAT" CIRCULAR.

Whatever may have been the source of the "Hold Your Wheat" circular, whether originated by Alliance zealots or contrived by speculators to bull the market long enough to get rid of their holdings, apparently its temporary success has led to another effort in the same direction. The enormous receipts of wheat at Minneapolis and Duluth have naturally kept prices down, and the Alliance leaders, whether acting for themselves or induced by speculators, are now sending out another circular to Minnesota and Dakota members, warning them that at the present rate of delivery, most of the wheat crop will be out of the farmers' hands before the first of the year. It announces the belief of the leaders that wheat will sell before long at \$1.50 and possibly \$2 per bushel, and that farmers must hold their wheat if they would reap the benefit of the high prices instead of the speculators.

After a summary of figures and sundry unproved allegations, the circular says: "The talk that \$1 wheat in Chicago is a high price under present circumstances is absolutely idiotic, for the average price in England being \$1.41, no one in Europe dares expect to eat wheat 21 cents below an average price this year. Wheat will soon be over \$1.50, no matter how much farmers and speculators work together to keep prices down, and we would advise those who can comprehend the situation to hold their wheat for \$1.50, and add for every month they keep it, say, 5 cents to the price. Hold your wheat. You cannot get left."

One need not deny that the bull arguments are cogent enough, while denying that the circular will do little or no good so far as the farmers are concerned. The apparent success of the former circular was that it came in the very nick of time. The enthusiasts forget all about rye, which was boosted even higher than wheat, although the "Hold Your Rye" circular was is-

sued by the Czar of Russia. Beyond question if all farmers should hold their grain, they could seriously affect prices; but the most united action likely to be taken will only prevent a glut of grain, and even does not seem to prevent that. Enough farmers will sell when they want to, or have to, so that prices will be kept steady, even if they should continuously advance. No combination will be effected strong enough to send prices up with a bound.

SHORTAGES AT TERMINALS.

Country shippers complain of shortages in shipments to terminal elevators, and Eastern millers complain of shortages in wheat shipped from elevators at Western grain centers. Members of the Dominion Millers' Association have decided to buy no wheat from elevators against which shortages have been reported until such shortages have been made good, and the Pennsylvania Millers' Association will in the near future probably keep its members informed regarding shortages in shipments from elevators at grain centers. Upon comparing notes Eastern millers have found that shipments from some elevators at grain centers are always short weight; shipments from some are only short 1 per cent., while others are heavier, and from a few full weight is generally received.

The action of the millers will have a tendency to encourage elevator men at terminal points to put full weight in every car, but country shippers who send grain to central markets will continue to suffer losses, until they compare notes and act together. At present they cannot tell whether heavier shortages occur at one elevator than at another, and many accept the shortages as due to their own mistakes, which of course is frequently the case. There are good reasons for thinking that a comparison of shortages in grain shipments by country shippers would result in the discovery of heavier and more frequent shortages occurring at some elevators than at others. The discontinuation of shipments to elevators noted for heavy shortages by a number of shippers would go far toward discouraging heavy deductions "for future shrinkage" at other terminal elevators.

A WAREHOUSE LAW AS A PANACEA.

The sub-treasury scheme and many others of its kind are things of the past, but one scheme dies only to make way for another. The establishment of state inspection of grain is now considered, by the impractical, as the one thing necessary to bring prosperity to everyone and make a grain market for the world at every cross road that has an elevator. The uproar and wild claims accompanying the establishment of useless state inspection in Nebraska has been the means of inciting a feeble agitation for the enactment of a warehouse law in Iowa and in Colorado.

In neither state would the enactment of such a law increase or facilitate business. The idea that stringent regulations and state inspection for which a large fee is charged will build up a market is erroneous. The enforcement of such laws in other than distributing centers retards rather than facilitates the grain business. Neither Iowa, Nebraska or Colorado has a grain distributing center of importance. No buyer outside these states thinks of going to any point in either state to purchase grain. He goes to the old established markets with reliable inspection, to which the surplus grain of different states is rightly sent for distribution. If state inspection is established in Iowa or Colorado the grain producers will have to pay for it without receiving a particle of benefit in return.

The promoters of this scheme in Nebraska and Iowa only claim that public warehouses and state inspection will benefit the producer in one way (the dealers are not taken into consideration). That is by enabling him to store his grain and borrow money on it. Farmers can store their grain at home and borrow money on it without a warehouse law. By so doing they will save in-

spection fees, storage charges and cost of transporting it. They will also save inspection fees on the grain they do not store at home and the price of grain will not be continually kept down by a large visible supply which can be thrown upon the market at a moment's notice.

RYE IN EUROPE.

With our paltry production of 28,000,000 to 30,000,000 bushels of rye, we can hardly appreciate the importance of rye as a bread grain in Europe. The average rye crop of Europe is greater than the wheat crop by a hundred million bushels. Last year Russia produced 640,000,000 bushels of rye, Germany 240,000,000 bushels, and almost every other country sufficient to make it one of the most important of the cereal crops. Last year the world's rye crop amounted to 1,280,000,000 bushels, of which Russia produced one-half. This year the crop is about 280,000,000 bushels less, and Russia produces only 420,000,000 bushels. These figures explain not only the czar's edict prohibiting the export of rye, but the effect of the edict as well upon both the wheat and rye market. There are 200,000,000 people whose staple bread is rye.

THE NORTH DAKOTA ELEVATOR AND INSPECTION IMBROGLIO.

The warehouse commissioners of North Dakota adopted rules and regulations for arbitrarily governing the actions of every one who has anything to do with grain on its way from the producer to the consumer, but like the laws of preceding years the rules have been too extensive, so cannot be enforced.

The vote-seeking members of this commission were so unreasonably arbitrary as to insist that every grain buyer of the state, whether he have a shovel house of 1,000 bushels' capacity or a large elevator, must operate his house as a public warehouse and store at the low rate established by law, all grain offered, and they went so far as to apply to the court for a mandamus to compel the National Elevator Company to receive a lot of wheat which it had refused to accept for storage, but offered to buy. The court decided that there was no authority to compel elevator companies to store grain against their will. Many courts have rendered the same decision before.

In this case the judge also decided that the laws of 1890, governing the storage of grain, do not apply to any warehouses except those at Grand Forks, Fargo, Wahpeton and Fairmount. The case has been appealed to the Supreme Court, but the decision will be sustained as the law is very clear on this point, so the over-confident regulators will be able to rule only those elevators at the four points named, which shall be operated as public warehouses. The commissioners will have nothing to do with elevators at other points. Weekly reports will not be issued from elevators at outside points, and if elevator men having houses at such points desire to do a storage business they can charge what they wish—it will not be an unfair rate.

These lordly chumps also insisted upon stopping all grain going out of the state and inspecting it. Of course such an inspection would be of no use to the producer or any one else, as the grain could not be sold by such grades, but would be re-inspected at the terminal and sold by the grade there given it. The producer would be taxed 50 cents for this useless service, cars loaded with grain would be delayed from three to twenty hours (grain could not be inspected at night) and a constant blockade would exist on the line of every railroad leading out of the state. It would be impossible to prevent a blockade if such absurd interference with business were permitted.

The inspectors at Grand Forks attempted to inspect wheat in transit, but failed, as the train men would neither open the cars nor tell which contained grain. This led the railroad officials to procure an injunction in the United States District Court restraining commissioners and inspectors from enforcing the inspection of grain

in transit or from instituting or prosecuting in the state courts any proceeding to compel said companies to stop or open grain cars. The law authorizes the inspection of grain about to be placed in warehouses or shipped out only, and this at but the four points named. Inspection at other points will undoubtedly be prohibited by the court on the ground that it interferes with inter-state commerce.

The ambitious commissioners will have their authority over inspection confined to the four cities, and will be able to regulate only public warehouses at these points, which will be few in number if any are so operated.

EXPORTING MIXED WHEAT.

New York shippers are charged with mixing No. 2 and No. 3 wheat in equal quantities and selling it in European markets as Toledo No. 2 red winter wheat at a price several cents below what the holders of pure No. 2 red, Toledo inspection, can afford to sell at. The charge and complaint is made by one with a large quantity of pure No. 2 on hand. If European buyers will pay a relatively higher price for mixed wheat, let us mix wheat of inferior quality with the good and sell it to them. They have handled ungraded dirty Indian and Russian wheat so long that they are unable to make fine distinctions between different grades of American wheat.

American grain exporters are looking for business. They always have, and always will, strive to supply the foreign demand. If European buyers, and especially those of the United Kingdom, want high grade wheat of uniform quality, they know where to come for it. They also know that they cannot obtain such wheat at the same price paid for the mixed stuff.

When a system of reliable inspection has been established in Russia and India, as now proposed, British buyers will learn to buy by grade, and will be compelled to make a greater distinction between good and bad grain. This will be an aid to American exporters of grain of superior quality, and encourage the shipping of unmixed grain to European markets.

AMERICAN PORK AND BREADSTUFFS IN GERMANY.

The prohibition by the German Government of the importation of American pork on the ground of its unhealthfulness, which has been in force for ten years, is now rescinded, and the American hog re-enters Germany on the same terms as others of his kind. While the alleged ground of prohibition was unhealthfulness, no one has ever doubted that American pork was just as good if not better than that of other countries, and that the prohibition was a sort of retaliation against America as well as an added measure of protection to the German peasants. The removal of the prohibition leaves American pork on the same footing with that of other countries; the duty remains, but as all pork imported into the Empire pays it, Americans of course have no ground of complaint. It is a fact worth noting that American pork is to be received on the strength of an American certificate of inspection, which shows that the claim of unhealthfulness was nothing more than a pretense. This good news in regard to the great American hog is supplemented with the notice that German discriminating grain duties are to be done away with. Under these duties in favor of Russia, America only exported \$415,000 worth of wheat, flour, rye, oats and barley last year. The following are the American equivalents of the German import duties hitherto in force on the articles named in the Washington dispatch of yesterday, duty of 1 mark per 100 kilogrammes being nearly equal to 10.8 cents per 100 pounds: Per bushel, wheat 32½ cents, corn 12.08 cents, rye 30.2 cents, oats 13.8 cents, barley 11½ cents, buckwheat 10.8 cents and beans 13 cents; per 100 pounds, flour and oatmeal \$1.13¾, malt 43.2 cents, starch \$1.15, provisions \$2.16. Such duties are not protective, but prohibitive, as the result shows, for

Russia virtually monopolized the grain trade of Germany. It is not impossible that the duties will be suspended altogether, but in any event they will be decreased to the figures placed on imports from Austria and Russia, which will give American breadstuffs an equal chance.

What has come over the spirit of the Kaiser's dreams? Simply a little clause in the reciprocity clause of the tariff law, which allows the President to reimpose a duty on sugar coming from countries which discriminate against American products. Germany last year sent us more than 500,000,000 pounds of sugar, the product of her beet sugar factories. There is little question that the threat, expressed or implied, to reimpose the tax on German sugar paved the way for the triumphant re-entrance of American pork and breadstuffs into Germany.

THE ERIE CANAL.

In spite of the rush of the season's business the Erie boatmen are making nothing. A few days ago the railroads took 700,000 bushels of grain to be carried from Buffalo, while the canal took but 50,000 bushels. The unheard-of phenomenon was witnessed of rail rates from Buffalo to New York quoted at 3 cents, while the canal rate was 3¾ cents. These rates were made by the roads in the face of the fact that they had more grain than they could carry and could easily have done a profitable business by merely asking for better figures. The manifest purpose of the trunk lines is to cripple the canal by freezing out the boatmen. Already the latter are in despair, and the roads evidently intend to keep them in that state of mind until they give up the unequal contest.

CORN IN EUROPE.

The immense shortage in rye and wheat in Europe again brings forward the perennial question why Europe does not take our corn. Attempts have been made from time to time to familiarize Europeans with our corn, but not with very marked success. When Col. Bridgland was consul at Havre, by strenuous effort he introduced corn there and at Paris, as food for horses; but the trade has never amounted to much. Col. Murphy attempted to do something at the Paris Exposition, but he was not well supported in his efforts. In fact, with an enormous crop of corn in this country, which can annually be sold at low prices compared with those of other cereals, and yet remunerative to our farmers, European countries are likely to suffer for bread this year because they have not yet learned how to prepare our cheap corn in a palatable manner for the table. If Europeans would add corn to their diet all fears of distress on account of the failure of their cereals could be dismissed, at least so far as a substitute supply is concerned. American corn could feed the teeming millions of Europe more cheaply than they can raise grain for themselves. Secretary Rusk is confident that this year's distress abroad will make an entering wedge for our corn. We hope he reads the signs aright.

THE CHICAGO BOARD OF TRADE AND THE BUCKET SHOPS.

A year and a half ago the Chicago Board proposed, as a radical measure against the bucket shop nuisance, to dismiss the telegraph operators from the floor of the Board, and, further, to discontinue its official quotation department. This latter move was rendered necessary by the legal aspects of the case, and in order to reach the bucket shops the Board was compelled to discontinue its official quotation department altogether. The move was not an unqualified success, and the members of the Board who did not control private wires have been seriously inconvenienced all this time. The owners of private wires have profited enormously by the warfare on the bucket shops, but all others have suffered in purse, as the private wires monopolized busi-

ness which before had been generally distributed. So the Western Union and Postal companies are to put back their wires, and in a month it is expected that the old service will be resumed, to the great relief of all who do not have private wires. The telegraph companies have agreed to keep the bucket shops from using their wires; at least that is supposed to be the understanding, but they will probably be unable to carry out that part of the programme, as both the companies and the Board doubtless understand that the difficulties in the way of keeping such an agreement.

DISCRIMINATION IN FAVOR OF DULUTH.

A number of roads entering Minneapolis from the West have made the same rate on wheat to Duluth as to that city. This is a direct discrimination against Minneapolis and in favor of Duluth. The dealers and millers of Minneapolis are, however, thoroughly aroused, and will do everything in their power to have the injustice discontinued.

The grain is shipped right through Minneapolis on its way to Duluth, and the same rate is charged in each case, but the Minneapolis miller has to pay 15 cents a barrel to get his flour to Duluth. The Duluth market usually rules from 3 to 5 cents in advance of the Minneapolis market, so much of the wheat shipped from the Dakotas is being taken through Minneapolis to Duluth. The receipts at that point yesterday were the largest in the history of the trade, being over 1,100 cars. Duluth has the advantage of water navigation, and if this additional advantage is maintained most of the wheat shipped from the Northwest during the season of navigation will be sent to Duluth.

The rest of the year it will be sent to Minneapolis. It is doubtful if the discriminating rate can be maintained, as it would surely destroy the grain trade and milling business at Minneapolis and build them up at Duluth.

GRAIN INSURANCE THIS YEAR.

We reproduce from an insurance paper, on another page, an article which shows that the insurance companies intend to get a slice off the present grain crop, and a good slice, too. The writer candidly says that "the right way to do grain insurance is to get good compensating rates to begin with," advice which the companies have never slighted that we remember. Another piece of advice is to "charge full short rates" on insurance wanted for but a short time. This advice likewise is a piece of supererogation. The "short rates" of the companies are always "full" enough. In fact they are simply enormous.

The *Investigator*, another insurance paper, says: "If the reports of the building of elevators and granaries for the reception of the tremendous grain crop are true, there will certainly be a demand for more insurance, as well as an absence of losses caused by 'hard times.' Of course this is gratifying to the insurance companies, and they are not to be blamed for the jubilation which they feel. But it portends pretty stiff rates. A year like the present, when prices are advancing and pretty nearly every one is doing a rushing business, is just the time when the tribute takers lay on the burdens. With good prices and fair margins people do not scrutinize the small things that become so onerous when hard times come.

But one piece of advice which is given is pertinent. The grain houses should be cleaned up. Accumulations of dirt and dust are elevator incendiaries. By all means clean up the houses, and keep them clean.

NEW ORLEANS, grain men are sanguine that between the present and the close of the calendar year 7,000,000 bushels of wheat will be exported from that point.

Grain Dealers' Associations.

KANSAS AND NEBRASKA GRAIN DEALERS' ELEVATOR ASSOCIATION.

President, MASON GREGG, Lincoln, Neb.; *Vice-President*, FRANK LOWER, Council Grove, Kan.; *Secretary*, W. T. CAYWOOD, Clifton, Kan.; *Treasurer*, O. A. COOPER, Humboldt, Neb.

GRAIN SHIPPERS' ASSOCIATION OF NORTHWEST IOWA.

President, T. M. C. LOGAN, River Sioux; *Vice-President*, H. HANSON, Odebolt; *Secretary and Treasurer*, F. D. BABCOCK, Ida Grove; *Assistant Secretary*, F. G. BUTLER, Schaller.

Executive Committee, E. A. ABBOTT, Des Moines; J. Y. CAMPFIELD, Sac City, and T. M. CATHCART, Kingsley.

ILLINOIS GRAIN MERCHANTS' INSURANCE AND PROTECTIVE SOCIETY.

President, H. C. MOWREY, Forsythe; *Secretary and General Manager*, S. K. MARSTON, Onarga; *Vice-President*, EDWIN BEGGS, Ashland; *Treasurer*, E. R. ULRICH, Jr., Springfield.

Executive Committee, E. F. NORTON, Tallula.

Committee on Claims, W. B. NEWBIGIN, Blue Mound.

GRAIN DEALERS' ASSOCIATION OF OHIO.

President, E. C. WAGNER, Columbus, Ohio; *Vice-President*, E. M. BENNETT, JR., Urbana; *Secretary*, E. W. SEEDS, Columbus; *Treasurer*, J. W. McCORD, Columbus.

Board of Managers, J. C. HANNUM, Duvals; J. W. JONES, Radnor; J. P. McALLISTER, Columbus; J. W. WOLCOTT, Conover, and N. R. PARK, Ada.

Legislative Committee, J. W. McCORD, D. McALLISTER, E. W. SEEDS, E. C. WAGNER, W. A. HARDESTY, and E. C. BEACH.

EDITORIAL MENTION

A STATE grain inspection department will be established at Wichita, Kan.

Do NOT forget that we solicit communications on subjects of interest to grain dealers and elevator men.

With Minneapolis and Duluth averaging from 600 to 1,200 cars of wheat a day, it does look as if the Alliance did not have a very close grip on wheat deliveries.

If anything of interest to the grain trade of the country occurs in your part of the country let us know of it. We will be pleased to receive items of news at any time.

TWENTY-THREE THOUSAND tons of grain went East by railroad from Chicago during the week ending Sept. 12. In the same time 133,000 tons of grain and flour went forward by lake.

The Farmers' Alliance of Missouri has declared against the sub-treasury scheme. If the unprincipled agitators are not very careful, they and their work of discontent will be denounced.

CHIEF INSPECTOR PRICE's assistants have been worked pretty hard of late, even to the exclusion of Sunday rest. Last Sunday they inspected cars on five roads and raised the receipts to 2,912 cars.

With artificial rain to protect grain from drouths and smoke to protect it from early frosts our farmers will surely be able to get a good crop once in a while, and the necessary importation of breadstuffs will not occur as soon as the pessimists predicted. The rain-making experiments in Texas have been very successful, and many

fields of grain in the Northwest have been saved from frost by smudges.

THE farmers now have twenty-five elevators in Eastern Washington and Western Idaho, which will be offered "for sale at a bargain" in a year or two. They expect to drive the elevator companies out of business, but, as heretofore, will fail.

WITH all its misfortunes, and the opposition, legal and illegal, of the elevator pool, the Cyclone Floating Elevator has not been forced into the elevator ring or out of the business, but is transferring grain at Buffalo at a less rate than the elevators in the pool.

REPORTS of threshers to Secretary Mohler of the Kansas State Board of Agriculture, according to his last report, show the wheat crop of that state to be about 60,000,000 bushels, and yet the pessimists insist that the United States must soon import wheat.

AMONG the new cards in this issue is that of the Kannenberg Roofing Company of Canton, O., the originators of strictly genuine steel roofing. They request all who want a superior roof or meditate sheathing their buildings to write for prices and samples.

MESSRS. J. A. CAMPBELL & SON of Lincoln, Neb., write us that they have had a good trade this summer and have new jobs on hand at this time at Cozad, Table Rock, Minden and Saltillo, Neb., besides a number of houses to remodel and refit at various places.

TOLEDO now has an inspector of weights, and shortages at that port have decreased. A decrease at every grain market would be very acceptable to grain shippers. The small shortages are just as annoying to shippers as the large ones. However, no weighman is infallible.

THE Government Agricultural Department is preparing to make a grand exhibition of cereals at the World's Columbian Exposition in 1893, and the different state agricultural departments are also making preparations to show samples of the best grain produced in the state.

THE word "frosted" will, in all probability, be dropped from all grades of Manitoba wheat. This word attached to some of the grades has been the means of bringing discredit upon all Manitoba wheat, so the grade heretofore known as "frosted" will probably be classed as "No. 4 Northern."

G. W. McNEAR, the wheat magnate, says that the exportable surplus of California is less this year than last, and he believes that high prices will rule. Perhaps some of the leaders of the farmers may be surprised to hear that Mr. McNear advises farmers to hold their wheat. They will probably think there is something suspicious in the advice, though Mr. McNear's reasons for it were excellent.

WATCH our list of "Valuable Books for Grain Dealers." We are continually adding new books to the list, and if it does not now contain a book you need, it may in the near future. A very useful book added with this issue is The Market Reporter. It is published quarterly and contains a convenient compilation of the grain, provision and stock markets. The last issue was July 1, the next will be Oct. 1.

MANAGERS of the Alliance in Eastern Washington and Eastern Oregon have ordered farmers to hold their wheat until spring, in hope of getting better prices, and it is reported that many of them are holding as much as they are able to. If the price of wheat advances in that district, the managers will receive credit for wonderful foresight. If it declines, the grain dealers, specu-

lators and capitalists will be scored severely, and blamed for every misfortune that befalls the farmers.

NOTICE was issued some time ago of an advance in the rate of storage on grain in elevator "A" at Toledo, O. A blockade was feared, and the advance was made in hope of avoiding it. Since then the rate has been restored to the old price.

EVERY elevator man who has a unique device, machine or apparatus in his elevator can have an illustrated description of the same published in the AMERICAN ELEVATOR AND GRAIN TRADE free of charge. It will set other elevator men to thinking and they may suggest some improvements in your device.

Do NOT permit young boys to play about your elevator. A large bin of grain has a strong fascination for them and they will play in the grain when no one is around, no matter how often they are warned. It is frequently recorded in our casualty column that a boy has been smothered while playing in a grain elevator.

THE haste of the London and Liverpool grain men to unload their cargoes tends to give credence to the belief of some that we are not "holding those fellows up" for all they will stand. Perhaps, with markets perversely bearish for years, we are not grasping the real situation as we ought. A few weeks, however, will tell.

AMERICAN failures in business are generally supposed to be masterpieces, in their way; but our British cousins take the pennant in the recent failure in the "corn trade" of Alexander & Son of Threadneedle street, London. Liabilities \$9,350,000; assets \$135,000; not 2 per cent. of the liabilities. Speculation in grain cargoes did it.

THE famine in Russia has developed some tales of woe and some examples of generosity that speak well for human nature. The peasants of some of the provinces where grain is plenty, have offered to loan their surplus to provinces in want, on the sole condition that the imperial government will see that an equal amount of grain is returned in due course of time.

ELEVATOR proprietors at Duluth and West Superior had fully determined to operate a number of their elevators (heretofore operated as public houses) as private warehouses, but have finally agreed to operate all but two of the principal elevators as public houses. The elevator men have very naturally become tired of being threatened with stringent legislative regulations and investigations by Alliance agitators, who seek only personal aggrandizement.

If lake carriers must make good shortages occurring in grain shipments it is reasonable to ask the rail carriers to do likewise. If the railroad companies cannot transport grain without losing from three to thirty bushels out of each car they should be compelled to pay for the grain lost. This would soon put a stop to the evil, for it would compel the carriers to provide better cars for transporting grain and to take steps to prevent losses at terminals.

Eight hundred farmers of Minnesota have formed the Northwestern Farmers' Protective Association, with the intention of doing away with middlemen. To start with, they have employed an agent at Duluth at a salary of \$150 per month and a commission on all wheat sold by him. The middleman is indispensable. The farmers have unwisely declared in favor of one receiver, as against the many who are driven by competition to give better service than can be obtained in any other way. The regular grain dealers at country and central markets know their business thoroughly, and will always handle grain to the

greater profit of the farmer than salaried agents, who are interested only in drawing their fixed stipend.

THE Nebraska State Board of Transportation has elected W. B. Taylor of Lincoln chief weighmaster and L. F. Hilton of Blair as chief registrar.

NEBRASKA is to vote this fall on an amendment to the constitution which will give the state a railway commission similar to that of Iowa, elected by the people direct, and having its duties prescribed by law.

It is feared by some that frost did more injury to Manitoba wheat than has been disclosed. The Canadian Pacific Railway people have not always told the truth, the whole truth and nothing but the truth about early Manitoba frosts.

FARMER agitators of North Dakota are chasing another phantom and have succeeded in getting a number of farmers to subscribe for \$100,000 worth of stock in a company organized for the purpose of fighting an alleged elevator trust. The agitators must have money, and as Uncle Sam will not give it to them gratis they work the gullible farmers for it.

THE lines running east from Kansas City have announced their intention of making a flat rate from Kansas City to the Mississippi River and Chicago on grain, and the grain shippers of that city are jubilant. This is one thing they long have sought, and it was partially for the promise of this that they withdrew their complaint filed with the Inter-State Commerce Commission against the roads.

EVERY business man should read a journal published in the interests of the trade in which he is engaged. It keeps him posted and causes him to take a greater interest in his business. The man who is well posted in any line of business has a great advantage over dealers who are not. He is proud of his business and commands the respect of his patrons as well as of his brother dealers. Read the AMERICAN ELEVATOR AND GRAIN TRADE and keep posted.

EVERY Western road is short of cars for grain, and there is a perfect glut of grain and jam of cars at many points. One morning there were 4,000 cars of grain in the yards at Kansas City. Some of the roads are not only short of cars but of locomotives as well. However, a car famine is not yet an actuality, but soon will be if the rush of grain continues. One pertinent suggestion to prevent grain blockades at Kansas City is to remove restrictions on the grain trade and encourage the erection of elevators at Kansas City. That would enable the roads to handle a vastly increased amount of grain business.

THE 170,000-bushel addition to the "Queen City Elevator" of D. G. Stewart at Pittsburg, Pa., was completed last month, giving a total capacity of 300,000 bushels. The addition was built by James Stewart & Co. of St. Louis at a cost of about \$40,000. The elevator has track connections with all railroads centering at Pittsburg. Steam shovels, cleaners and all other modern appliances are in its equipment, giving Mr. Stewart one of the most complete elevators in the country and adding greatly to his facilities as a receiver and shipper of grain, etc.

THE Chicago elevators have been working night and day and Sundays to handle the perfect flood of grain which has been pouring into the city. For days corn and wheat have been dumped into the elevator sinks, elevated, and then rushed through the loading legs into vessels. Most of this grain will go forward from Buffalo to the seaboard by rail. One railroad took in one day 1,500,000 bushels of wheat and corn to go forward

from Buffalo to New York at 5 and 4 $\frac{3}{4}$ cents. As the elevator rate at Buffalo is $\frac{7}{8}$ of a cent a bushel, the railroads are carrying the grain 460 miles for about 4 cents.

WASHINGTON is not without unprincipled demagogues whose principal occupation is trying to work the farmers. Some of them are seeking to gain favor with the farmers by libeling the grain dealers of the state, and one has gone so far as to charge grain dealers with setting fire to the farmers' warehouse, and with opposing their shipping their own grain by preventing their purchase of sacks, and other dishonorable things of which grain dealers, as a class, cannot be justly charged. Grain dealers are far more honorable and respectable than the groveling class of agitators who make defamatory charges against them.

OUR old friends, J. J. Blackman & Co. at 37 Water street, New York, are still with us, and we are reminded of the fact that on Sept. 1 they entered upon their twenty-eighth consecutive year in the grain and feed commission business in the New York market. They are now doing an increasing business in corn goods and seeds. Their "trump card," aside from their well-known energy and capacity, is that they never have touched options for themselves or any one else. This cannot but continue to commend them to the favorable consideration of shippers, especially as every detail of their business is under personal supervision.

UNIFORMITY in bills of lading is still sought by the National Transportation Association, and at the recent meeting held in Chicago a committee of seven was appointed to confer with the various traffic associations with a view to inducing them to join the shippers in the adoption of a satisfactory bill of lading. The plan of both carrier and shipper paying for unreasonable delays met with much favor, and a committee was appointed to induce the railroads to base their through rates on the sum of the locals via the various lake ports. Grain shippers who have any grievance of national interest regarding transportation matters should have it brought before this association.

ELEVATOR men of Kansas City, Kan., recently petitioned the Board of Trade of that city to indorse the dockage of grain received at the elevators of that city for dirt contained. What action was taken on the matter we are unable to state, but it met with considerable opposition. The elevator men claim that there is a loss in weight on each carload of grain transferred into the elevators and that when the grain is cleaned the elevators lose the weight of the chaff and dirt taken from the grain. They want to dock each car 100 pounds, which they think would be about a fair dockage. Country shippers will grant that these terminal elevator men are up on dockage matters, but will not agree to any such steal. Grain should be cleaned at country elevators. If terminal elevator men clean it let the owner stand the actual loss by dirt, no more.

A REALLY excellent article advertised in this issue is Thompson's "Duck Brand" Belt Dressing for use on leather, rubber and canvas belting. It has been on the market for years and its value is well known. It is a surface traction dressing, which keeps the belts pliable and in good working order without leaving any deposits of accumulated matter upon the belts or pulleys and which enables the belts to be run with much less tension than otherwise. It preserves the life of the belt and renders tightening unnecessary. When belts are run exposed to steam and water, the application of this dressing will pay good returns. Rubber and canvas belts are kept soft and pliable, are prevented from becoming hard and cracking. Elevator men will find this dressing well suited to their needs. The Main Belting Company, 248 Randolph street, Chicago, are sole agents and will be pleased to answer all inquiries.

Points and Figures.

Duluth now receives 500 or 600 cars of wheat daily.

The flax palace at Forest City, Ia., was opened recently.

Exports of wheat from Philadelphia in August were 2,450,586 bushels.

Oliver Dalrymple expects to harvest 600,000 bushels of high grade wheat on his large Dakota farm.

The shipments and receipts at Baltimore during August aggregated 13,123,557 bushels, which exceeds the business of any preceding month.

The Pacific coast on Sept. 1 had 130 vessels afloat with wheat and flour for Europe; 87 sailed from San Francisco, 26 from Astoria and 16 from Tacoma.

St. Paul received during the crop year ending Sept. 1, 1,922 cars oats, 778 cars corn, 609 cars flaxseed, 315 cars spring wheat, 144 cars barley and 34 cars rye.

Minneapolis received during the crop year ending Sept. 1, 86,783 cars wheat, 3,340 cars corn, 4,084 cars oats, 344 cars rye, 1,036 cars barley and 1,845 cars flaxseed.

The Minnesota Warehouse Commissioners recently fixed the fee for inspecting flax at 65 cents per car into and out of store, and \$1 per 1,000 bushels for inspecting from store into vessels.

The cereal acreage of Great Britain, according to the official reports, is 2,388,671 acres wheat, 2,290,746 barley, and 4,113,604 oats, against 2,479,500 wheat, 2,293,396 barley and 4,123,200 oats last year.

The Pacific coast states exported 717,796 barrels flour and 13,157,826 centals wheat to Europe during the first eight months of the year. In the same months of last year 496,026 barrels of flour and 11,832,607 centals wheat arrived in Europe.

The Chicago *Bulletin* says the No. 2 wheat received in August at Chicago was 38 per cent. of the aggregate. In Toledo the wheat by cars in July-August gives 81.59 per cent. contract grade. Of 101 canal b at loads 92 per cent. was contract grade of wheat.—*Toledo Market Report*.

"Have you any photographs of your children, Mr. Peck?" asked a friend of the Hon. Alpheus Peck. "I should say I had," answered Mr. Peck. "I've about a bushel of them." "Why, Alpheus!" exclaimed his wife. "Well, haven't we? Haven't we photographs of all four of them, and don't four pecks make a bushel?"—*Detroit Free Press*.

Mrs. Farmwife—Hiram, go right on the porch an' take down the thermometer; I don't propose to take any more chance on storms. Might jest as well hev had a good month for corn if I'd only known this in time. Hiram—What good'll takin' down the thermometer do with the weather? Mrs. Farmwife—All these prophets say the storm is due to Mercury.—*Colorado Sun*.

During the crop year ending Sept. 1 Duluth received 18,249,627 bushels wheat, 379,223 bushels oats, 171,936 bushels corn, 113,781 bushels flaxseed, 105,288 bushels barley, and 7,185 bushels rye; and shipped 15,874,927 bushels wheat, 385,182 bushels oats, 263,430 bushels corn, 127,717 bushels flaxseed and 134,504 bushels barley. Every item of the trade was greater last year.

The Michigan crop report for September gives the average yield of wheat per acre, according to the returns from threshers, for the southern counties as 19.56 bushels and 15.60 in the central. The estimated yield in the state is slightly in excess of 27,000,000 bushels. The estimated yield of oats per acre in the southern counties is 35.48 and 30.78 in the central, and the state average for barley is 18.26 bushels.

The stocks of grain in Chicago elevators last Saturday evening were 3,521,576 bushels of wheat, 3,957,129 bushels of corn, 1,355,683 bushels of oats, 635,970 bushels of rye and 26,170 bushels of barley. Total, 9,496,528 bushels of all kinds of grain, against 9,349,849 bushels a year ago. For the same date the Secretary of the Chicago Board of Trade states the visible supply of grain in the United States and Canada as 21,935,506 bushels of wheat, 8,286,529 bushels of corn, 4,042,566 bushels of oats, 2,706,297 bushels of rye, and 308,390 bushels of barley. These figures are larger than the corresponding ones a week ago by 2,072,362 in wheat and 1,319,444 in corn. The visible supply of wheat for the corresponding week a year ago increased 78,801 bushels.

ELEVATOR AND GRAIN NEWS

A rice mill is being built at Bartow, Fla.

A malt house will be built at Fort Worth, Tex.

Neef Bros. will build a brewery at Denver, Colo.

A grain elevator is to be built at Rapid City, S. D.

George Leitig has built an elevator at Seward, Kan.

John P. Dostal will build a brewery at Denver, Colo.

S. W. Woods will build a brewery at Prineville, Ore.

E. W. Allen, seed dealer at Portland, Ore., has sold out.

James McCabe, grain dealer at Defiance, Ia., has sold out.

Three elevators are being built at Humboldt, Neb., it is said.

Richard Ochsner is building a brewery near Vernon, B. C.

Stocker & Roehrich will build a brewery at Muhlenberg, Pa.

Six elevators will be built at New Orleans, La., by P. J. O'Reilly.

C. C. Kaufman will build a rice-cleaning mill at Portersville, Ala.

The Barrett Brewing Company is building a brewery at Cleveland, O.

Cochrane & Rankin, grain dealers at Dundee, Mich., have sold out.

A. W. Rieger is building a rice cleaning mill at Wilmington, N. C.

The Kehlor Mill and Elevator at East St. Louis, Ill., is nearly finished.

J. Y. Canfield, grain dealer at Sac City, Ia., has sold out to B. Baxter.

A stock company has been organized at Baker, Ill., to build an elevator.

An elevator of 100,000 bushels' capacity is being built at Winfield, Kan.

The Gambrinus Brewing Company will build a brewery at Buffalo, N. Y.

D. M. Roberts, grain dealer and miller at Iron Ridge, Wis., has sold out.

The Milwaukee Brewing Company will build a brewery at Tacoma, Wash.

R. O. McKicker, dealer in grain and coal at Cozad, Neb., has sold out.

The Farmers' Alliance has built an elevator at Fulton, Bourbon Co., Kan.

The receipts for grain inspection in Minnesota during July were \$5,913.43.

The C. Weyand Brewing Company is building a brewery at Buffalo, N. Y.

Schee & Morgan, grain dealers at Prlmghar, Ia., have dissolved partnership.

The farmers at Rosalia, Wash., are building a grain warehouse 50x100 feet.

H. D. Vanderveer has completed his new elevator at McCool Junction, Neb.

Roberts & Cubbison, dealers in grain and coal at Winfield, Ia., have sold out.

Farmers at Morden, Man., have subscribed \$8 000 for a 40,000-bushel elevator.

W. P. Remmel & Bro., grain dealers at St. James, Minn., have dissolved partnership.

C. P. Gormley & Co., grain dealers at Eagle Grove, Ia., have dissolved partnership.

H. C. Sattler & Co., dealers in grain and cattle at Osmond, Neb., have sold out.

Abraham Dixon, grain dealer at Dedham, Ia., has been succeeded by Niles & Slife.

The Northwestern Grain Company has been incorporated at Minneapolis, Minn.

Barnett & Frees, dealers in grain, coal and lumber at Stuart, Neb., have sold out.

Koehler & Vedder at Brandon, Wis., have adopted the A. P. Dickey Grain Cleaner.

C. E. Myers & Co., grain dealers at Griswold, Ia., have been succeeded by A. F. Rickey.

The Rapid City Farmers' Elevator Company has been incorporated at Rapid City, Man.

A mortgage for \$40,000 on the International Elevator at Buffalo, N. Y., was recently foreclosed by the New

York Mutual Life Insurance Company. This was one of the Sherman Brothers' houses.

McKenzie & McLaurin, elevator owners at Alexander, Man., have dissolved partnership.

A 25,000-bushel elevator will be built at Elkhorn, Man., by H. Crowe & Co. of Winnipeg.

W. E. Nye & Co., grain dealers, have sold out their business at Beaver Crossing, Neb.

E. P. Bacon will operate the Putnam Elevator at Minneapolis, Minn., as a storage house.

John Crook at Wilton, Wis., has put in A. P. Dickey Manufacturing Company Cleaners.

The Twin City Brewing Company has been incorporated at Peru, Ill., with \$250,000 capital.

S. C. Gregory, dealer in grain and cattle at Talmage, Neb., has sold out his grain business.

The Knickerbocker Grain and Stock Company of Albany, N. Y., has suspended business.

The Flathead Milling and Elevator Company has been incorporated at Columbia Falls, Mont.

Annan & Co., proprietors of grain elevators in New York City, have dissolved partnership.

The farmers of Palouse, Wash., have decided to erect an elevator of 80,000 bushels' capacity.

Cattell & Co., grain brokers at New York, N. Y., have taken Edward Beatty into partnership.

Robitaille & Poirer, dealers in grain and coal at Montreal, Que., have dissolved partnership.

F. L. Mark & Co. of Birch Run and Clia, Mich., have sold their elevator and grocery business.

Patten & Co. have leased their elevator at Le Sueur, Minn., to Poehler & Co. of Minneapolis.

The new Crescent Elevator at Kansas City, Mo., has been completed and opened for business.

A million-bushel elevator is to be built at Galveston, Tex., to transfer grain from car to vessel.

An elevator will be built at Oak Lake, Man., by Leitch Bros., in connection with their flour mill.

J. M. Groat, dealer in grain and coal at Waterloo, Ia., has been succeeded by White & Messenger.

McGovney & Co. are building a steam power elevator of 15,000 bushels' capacity at Curtis, Neb.

At Lykens, O., they have put in the A. P. Dickey Manufacturing Company's Grain Cleaners.

The Galland-Burke Brewing Company is building a brewery and malt house at Spokane, Wash.

The Planters' Oil Mill Company has been organized at Helena, Ark., to build a cotton-seed oil mill.

Snyder & Calvert, dealers in grain and proprietors of a general store at La Place, Ill., have sold out.

The Central Elevator Company of Cincinnati, O., failed Aug. 28. Liabilities \$25,000; assets \$15,000.

The Farmers' Elevator Company has been incorporated at Windom, Minn., with \$10,000 capital stock.

A grain warehouse has been built at O'Neill, Neb., by the Fremont, Elkhorn & Missouri Valley R. R.

Three boys stole \$42 worth of wheat and rye from the Baltimore & Ohio Railway at Baltimore recently.

At Wyaconda, Mo., they are putting in the A. P. Dickey Manufacturing Company's Grain Cleaner.

J. L. Denman of Whitewood, S. D., is having an elevator built by Seeley, Son & Co. of Fremont, Neb.

J. J. Mathews, dealer in grain, coal and lumber at Dana, Ia., has been succeeded by Rowels & Miller.

Pindell Bros. of Hannibal, Mo., have built an elevator. James Stewart & Co. of St. Louis, had the contract.

The Planters' Cotton-seed Oil Mill Company has been organized at Alexandria, La., with \$100,000 capital.

A grain elevator of 45,000 bushels' capacity has been built at Glen Elder, Kan., by the Farmers' Alliance.

Toncray & Bryan, grain dealers at Omaha, Neb., have been succeeded by the Bryan Commission Company.

Duncan Bros., dealers in grain and proprietors of a general store at Indianola, Neb., have sold their store.

A. D. Mulford & Co. have leased the 300,000-bushel Central Elevator at Minneapolis, for a terminal house.

James Lindsay, dealer in grain and hay at Smiths Creek, Ill., has been succeeded by Lindsay & Wallace.

A full line of Eureka grain cleaning machines is being placed in the new Pettit Elevator at Minneapolis, Minn.

An elevator has been built by the Carondelet Milling Company at St. Louis, Mo., in connection with its flour mill.

Morning & Son, grain dealers and proprietors of a general store at New Bavaria, O., have dissolved partnership.

Three elevators are being built at Callaway, Neb. The Fowler Elevator Company is building a 30,000-bushel steam power elevator, and the Farmers' Alliance is put-

ting up a similar house, while the Omaha Elevator Company is building a shovel house.

Honstain Bros. of Minneapolis are building a 30,000-bushel elevator at Montgomery, Minn., for T. W. Shiehy & Co.

S. C. Hunt & Son of Lynchburg, Va., intend to build an elevator in connection with their flour mill at that place.

Rhodes Bros., dealers in grain and agricultural implements at Everly, Ia., have been succeeded by Ira M. Fisher.

Morden, Man., received its first new wheat Aug. 31. It was of excellent quality and brought 70 cents in the market.

H. S. Whitmore of Galena, Ill., equips his warehouse with the A. P. Dickey Manufacturing Company's Grain Cleaner.

A. Ruyter and H. Wehmann of River Falls, Wis., have formed a partnership at Minneapolis, Minn., to deal in grain.

Bloomfield, Neb., has a new elevator of 10,000 bushels' capacity, built for J. Harrigan by Seeley, Son & Co. of Fremont.

The George A. Weiss Malting and Elevator Company of Chicago has increased its directory from four to five members.

Van Alstine & Sargent, dealers in grain and lumber at Gilmore City, Ia., have been succeeded by Van Alstine & Edgington.

E. M. Walbridge & Co., dealers in grain and agricultural implements at Randolph, Minn., have dissolved partnership.

Crenshaw & Beckwith have built an elevator at Charleston, Mo. James Stewart & Co. of St. Louis, had the contract.

Barlow & Crane have improved the receiving facilities of their elevator at Tekamah, Neb., by the addition of a wagon dump.

The new Iron City Elevator at Pittsburg, Pa., has been completed by James Stewart & Co., elevator builders of St. Louis, Mo.

A grain elevator of 600,000 or 750,000 bushels' capacity will be built at Kansas City, Mo., on a site furnished by Charles Hains.

Thomas, Loyd & Co., dealers in grain, coal and lumber at Thomasville, Ill., have been succeeded by S. D. Thomas & Bro.

The Farmers' and Merchants' Oil and Guano Company is building a cotton-seed oil mill and fertilizer factory at Fort Gaines, Ga.

The farmers in the vicinity of Groton, N. D., want an elevator and will build one themselves if no one will come to their aid.

The Eagle Brewing Company has been incorporated at Chicago. Capital stock \$300,000; incorporators, William Payne and others.

The Inter-state Investment Company of Kansas City, Mo., is considering the building of a million-bushel elevator at that city.

The Treherne Farmers' Elevator and Milling Company has been incorporated at Treherne, Man., to build an elevator, mill or both.

Seeley, Son & Co. of Fremont, Neb., have just finished the new 10,000-bushel elevator of Himebaugh & Maryott, at Rapid City, S. D.

James S. Rowe of Wilton, Ia., bought and shipped between July 1 and Aug. 20 39,000 bushels of oats, barley, rye, corn and wheat.

Strong & Miller are putting in the Dickey Manufacturing Company's Overblast at their new station, Stewartville, Minn., for flax.

F. Beyschlag & Co. of Nebraska City, Neb., have a new 150,000-bushel elevator recently completed by Seeley, Son & Co. of Fremont.

A stock company has been organized at Spokane, Wash., to build a 500,000-bushel elevator and malt house. Capital stock \$100,000.

Osborne & McMillan are building several elevators in North Dakota along the new line of the "Soo" road from Hankinson to Valley City.

A 25,000-bushel house is being built at Crystal, N. D., and another at Park River, Minn., by the St. Anthony and Dakota Elevator Company.

The Columbus Brewing Company has been incorporated at Chicago. Capital stock \$150,000; incorporators, William Boldenweck and others.

West, Andress & Co. of Chicago have put in another A. P. Dickey Manufacturing Company Grain Cleaner, this time at West Brooklyn, Ill.

The Moosomin Elevator Company has been organized at Moosomin, Assa, with \$8,000 capital stock. A 40,000-bushel elevator will be built.

Enormous quantities of hay are annually produced in the valley of the Platte River in Nebraska. Mile after mile is covered with hay. The Pembina valley in Man-

itoba is also a hay making section. The grass is six feet high, very thick and some of the meadows cover several hundred acres.

O'Neil Bros. have adopted the A. P. Dickey Manufacturing Company's End-shake Warehouse Mill for their new elevator at Bookwalter, Neb.

Several of the elevators at Buffalo, N. Y., which had stood idle since last season, were opened Aug. 15 to accommodate the increased receipts.

The Minneapolis and Northern Elevator Company of Minneapolis, Minn., has been reincorporated to increase its limit of liabilities to \$2,000,000.

James Stewart & Co., the elevator builders of St. Louis, Mo., have completed a transfer house in that city for the Lewis Sharp Commission Company.

W. W. Cargill & Bro. of La Crosse, Wis., are putting in the A. P. Dickey Manufacturing Company's Side-shake in their Humbird (Wis.) house.

The Midway Elevator Company of Minneapolis, Minn., is building a 100,000-bushel house in connection with the 75,000-bushel elevator erected last year.

Mason Gregg of Lincoln has ordered an End shake Warehouse Mill of the A. P. Dickey Manufacturing Company for his Hubbell (Neb.) house.

C. Klein at Kings, Ill., has bought the A. P. Dickey Manufacturing Company's Side-shake Warehouse Mill, and is well pleased with it, so he writes.

Charles F. Iddings of North Platte, Neb., will soon have a 10,000 bushel elevator completed for him by Seeley, Son & Co., elevator builders of Fremont.

The John Thyson Grain and Commission Company of St. Louis failed Aug. 15. The firm had more contracts than it could carry, hence the suspension.

J. M. Davidson & Co., grain dealers at St. Louis, Mo., were caught short on wheat Aug. 12, and had to suspend. The liabilities and assets are about equal.

Bonds of the Chicago Granaries Company are in better demand at London owing to a prospect for good earnings the coming year. None are offered at less than 65.

Mr. Hall of Goddard & Hall, grain dealers at New Orleans, La., is trying to have an elevator built. He has gone North to interest the Illinois Central, if possible.

A 15,000-bushel elevator has been built at Higginsville, Mo., for E. W. Kruse & Co. by Seeley, Son & Co. of Fremont, Neb., builders of the "Seeley" Grain Elevator.

Dale, Nessly & Co. at Udall, Kan., who lately put in a Quadruple Separator of the A. P. Dickey Manufacturing Company's make, are well pleased with the same.

Seeley, Son & Co. of Fremont, Neb., recently finished a 250,000-bushel elevator for H. R. Heath & Sons at Ft. Dodge, Ia., and are building a large court house at Cherokee.

The elevator addition to the Clinton Mill at Buffalo is being rebuilt, and will be ready for business next month. The ruin wrought by the windstorm has caused serious delay.

Rowland & Hall at Crawford, Neb., Frank L'nderman at Troy, Ind., and the E. M. Dickey Company at St. Ansgar, Ia., are putting in A. P. Dickey Grain Cleaners.

The Pacific Coast Warehouse Company has been incorporated at Port Costa, Wash., where a site has been purchased for wharves and warehouses of 35,000 tons' capacity.

The Western Milling Company has been incorporated at Regina, Assa., to operate a grain elevator and flour mill. Incorporators, Spring Rice, J. D. Sibbald and C. B. Paget.

The 225,000 bushel Martin Elevator at Minneapolis, Minn., has been bought by A. J. Sawyer & Co. to be operated by the Northern Dakota Elevator Company as a terminal house.

An early maturing variety of wheat has been discovered by W. A. Doyle, a farmer near Beulah, Man. It grew seven feet high and was ripe Aug. 20, a week before the earliest red Fife.

The Baker Elevator Company has been incorporated at Leland, Ill. Capital stock \$15,000; incorporators, M. J. Flaherty, W. N. Anderson and W. P. Warren. An elevator will be built.

Hon. T. M. Elliott of Elliott, N. D., who has 1,000 acres of No. 1 hard of his own this year, is fitting up his private elevator with the A. P. Dickey Manufacturing Company's Grain Cleaner.

W. H. Taylor & Co. at Tobias, Neb., have put in the A. P. Dickey Manufacturing Company's End-shake Warehouse Mill, and E. G. Dey & Co. of Table Rock, Neb., the Dickey Overblast.

The George H. Dodge Company has been incorporated at Minneapolis, Minn., to deal in grain. Capital stock, \$50,000; incorporators, Elbridge F. Dodge, Geo. H. Dodge and Benjamin C. Frost.

The grain trimmers at West Superior, Wis., are a bolsterous lot. Formerly there were two organizations, but after much fighting they consolidated. Recently a new organization was formed with a man named McMackin at the head. When McMackin put in an appear-

ance at the docks the old hands threatened him, and he fled into the bay, hotly pursued. There he stood, up to his neck in water, dodging stones and other missiles, until a policeman approached.

The first new wheat received at West Superior, Wis., was two earloads of No. 1 hard, shipped from Wahpeton, N. D., via the Northern Pacific to the Sawyer elevators, where they were unloaded Aug. 22.

J. B. M. Kehlro was publicly denounced in the St. Louis Merchants' Exchange Aug. 21 by F. G. Bowman of Carter & Bowman for alleged extortionate calls for margins. This was during the great "flurry."

The Lake Superior Elevator Company and the Union Improvement Elevator Company held their annual meetings at Duluth, Minn., Aug. 18 and 19, at which the former officers and directors were all re-elected.

A 15,000 bushel elevator has been completed for H. W. & A. A. McGovney at Curtis, Neb., by Seeley, Son & Co. of Fremont, who are also constructing a \$100,000 brewery in their city for the Fremont Brewing Company.

The Northern Grain Company has been organized at Minneapolis, Minn., to deal in grain and build and operate elevators. Capital stock \$60,000. L. Christian, C. E. French and James W. Hoit compose the company.

The Brisbane Allan Brokerage Company of Denver, Colo., failed Aug. 16. The company dealt heavily in wheat. Kennett, Hopkins, & Co., its Chicago correspondents, lose several thousand dollars by the failure.

The Baltimore Grain and Stock Commission Company has been incorporated at Baltimore, Md. Capital stock \$20,000; incorporators Alexander Halloway, Andrew Popplein, Joseph S. Smith, John Roney and John F. Stump.

The Inter-state Grain Company and the Pillsbury-Washburn Flour Mills Company at Minneapolis, Minn., and Schneekloth & Son at Holstein, Ia., are putting in more of the A. P. Dickey Manufacturing Company's Quadruple Separators.

The Farmers' Elevator Company has been incorporated at Talmage, Neb., by the Alliance. J. R. Caywood is manager, and it will be conducted on the cooperative plan. An independent farmers' company has bought the O. I. Hulburd Elevator and placed J. H. Mohrman in charge.

The Canadian Pacific Railway has made arrangements to promptly handle the heavy crops of the Canadian Northwest with additional cars and locomotives. The water route from Fort William has also been looked after. It is said that the Canadian Pacific is building elevators at Quebec.

The largest cargo of grain ever exported from Baltimore was taken by the ship Patmas for Antwerp Sept. 2. It amounted to 149,182 bushels, valued at \$156,600. The receipts and shipments of grain and flour, reduced to wheat, from Baltimore in August aggregated 13,123,557 bushels, which is more than ever was handled in any month before.

A grain-laden car from Western Pennsylvania arrived at Philadelphia recently with an inside passenger not included in the bill of lading. When the door of the car was opened out jumped a strange animal and scared the man out of his wits. Having lived on the fat of the land for over a week, it was too fat to run far, and was captured and found to be a ground hog.

Philip D. Armour has bought the Woodman & Harris grain elevators in Nebraska, Kansas and Colorado, and in Iowa on the Burlington & Missouri Railway. The death of Mr. Woodman moved the United States National Bank to attach the Woodman & Ritchie elevator at Omaha, Neb., to secure notes for \$30,000. Later the attachment was released and a real estate mortgage given in its stead.

The owners of the Star Elevator annex at Minneapolis, which collapsed Aug. 12, would have the insurance men believe that Thompson's feed mill was on fire before the elevator burst and that the fire or explosion caused the fall of the elevator. If this theory is correct they can collect the insurance, if not, then they will be liable for the damage to the feed mill and will not get the insurance money.

A grain elevator is being built at Benton Harbor, Mich., by the Cincinnati, Wabash & Michigan Railway. The Graham & Morton Transportation Company will operate a line of winter boats on Lake Michigan to carry grain from the west shore to Benton Harbor. The grain will then go by rail to Newport News, Va., via the Cincinnati, Wabash & Michigan, Big Four and Chesapeake & Ohio.

Samuel Harold of Brantford, Ont., is one of the heaviest dealers in barley in the Dominion. He has been in the trade for twenty-two years, and ships large quantities from Western Ontario to New York and Buffalo. A year ago, just before the increased duty on barley imported into the United States went into effect, he rushed through more than 50,000 bushels. Samuel Simmons has a 70,000 bushel warehouse at Brantford, and has dealt in all kinds of grain for thirty years.

Rumsey, Bro. & Co., grain dealers at Chicago, suspended business Aug. 31. Henry Towner was the sole member of the firm. He was on the short side of the market, and when wheat went up to \$1.10 he was forced to the wall. His resources are equal to the liabilities. As long ago as 1829 Geo. W. Dole built a wooden

warehouse on the Chicago River and bought grain of farmers. Oliver Newberry of Detroit joined him in this enterprise and continued in the business until 1837, when George and Julian S. Rumsey entered the employ of Mr. Dole, their uncle. In 1853 Dole, Rumsey & Co. dissolved partnership and Rumsey, Bro. & Co. conducted the business. Since the death of the Rumsey brothers Mr. Towner, who was formerly their clerk, has managed the business.



Chicago Board of Trade memberships are selling at \$1,525 to \$1,550.

A hay exchange was formed in Kansas City, Mo., Aug. 12, by a meeting of hay dealers in the Midland Hotel.

The Buffalo Merchants' Exchange still gets Chicago quotations secretly, the Western Union's search for their source having proved fruitless.

The Western Union Telegraph Company is making arrangements to place operators on the Chicago Board of Trade on terms agreeable to the Board.

The reports of the West Superior Telegram that a grain exchange would be established in that city, with North Dakota inspection, are ridiculed by the Duluth News.

The opening of the Omaha Grain and Produce Exchange took place Aug. 20. Grain and elevator men of Nebraska and Iowa were present, and celebrated the occasion by a banquet in the evening.

The Minneapolis Chamber of Commerce is much crowded for room, and an addition to the building is talked of. As the Chamber is out of debt, and has a strip of ground adjoining its building, it can easily afford to put up an addition. Memberships are selling at \$500.

The grain committee of the Winnipeg Board of Trade is formulating rules and regulations to govern weighmen appointed under the bill now under consideration by the House of Commons at Ottawa. This action is taken to secure the advantages of the bill at the earliest possible moment should it become a law.

The Cincinnati Chamber of Commerce elected officers Sept. 8 for the ensuing year, as follows: President, Joseph R. Brown; vice-president, Michael Ryan; treasurer, George H. Bobber; secretary, James T. McHugh. Directors, Thomas W. Allen, J. M. Blair, Robert W. Wise, Frank A. Brown, B. W. Wasson.

At a recent meeting of the grain examiners of the Winnipeg Board of Trade, S. A. McGaw of the Lake of the Woods Milling Company, was elected chairman for the year. S. A. McGaw, S. Spink and William Martin were elected delegates to the annual meeting of grain examiners, at which standard grades will be established.

The present grain inspection system at New York was inaugurated about six years ago, when the grain section of the New York Produce Exchange abolished the former system of having several inspectors and weighers licensed by the Exchange. As it is now an officer of the Exchange known as the chief inspector of grain, weighs and inspects all grain.

The bucket shops have adopted many ingenious expedients to secretly get quotations from the Chicago Board of Trade. Owing to the success of these contrivances a dozen of the gambling houses are flourishing in the city in spite of the Board of Trade's officials. All wires above, in and around the Board of Trade building have been cut, and no new ones can be stretched. The quotations are signaled from the Board of Trade by some one, in the employ of the bucket shops, to a second party in an adjoining building, whence they are telegraphed to the different bucket shops.

"I'm in a hurry," he said, rushing into the hardware store, "just got time to catch a train. Give me a corn-popper, quick!" "All right, sir," replied the clerk. "Do you want a large pop-corner?" "No, just a medium sized—an ordinary pop-corner." "How will this pop-corner do?" "Is that a pop-corner?" "Yes. But you're getting twisted. You mean a corn-popper—no, a pop-corner! No, a—" "I mean a corn popper!" "Oh, yes, a pop-corner!" "Yes, be quick! Gimme a pop-corner, and be quick!" "All right! Here's your pop-corner."

From a Nebraska exchange we get this story: "A Furnas county farmer went out the other day after a load of hay. Having no pole with which to bind his load, he took his ax and commenced to chop down a stalk of corn for that purpose. He had it nearly cut in two when one of the ears of corn became detached and fell, crushing him to the ground. It broke his neck, both of his arms and one of his legs in seven places. He would have died but for the health giving properties of the Nebraska climate, which made him a well man again before he had walked half way to his house."

KANSAS WAREHOUSE LAW.

(CONCLUDED.)

Sec. 16. Any Board of Trade issuing licenses under the provisions of this act shall appoint a state weighmaster and such assistants as shall be necessary for the transaction of business in its locality.

Sec. 17. Said state weighmaster and assistants shall, at the places aforesaid supervise and have exclusive control of the weighing of grain and other property which may be subject to inspection and the inspection of scales, and the action and certificate of such weighmaster and assistants shall be conclusive upon all parties interested.

Sec. 18. Every Board of Trade issuing licenses under the provisions of this act shall fix the fees to be paid for weighing grain and other property and inspecting the same, and inspecting and testing scales within its jurisdiction, which fees may be added by the warehouseman to his charges for storage, and shall be paid monthly by said warehouseman to said Board of Trade or to such person for it as said Board may designate for the purpose of making such monthly settlements. Said fees, however, shall not exceed 25 cents per car for inspecting grain and 25 cents per car for weighing the same, and 25 cents for inspecting and testing scales for each test.

Sec. 19. Said state weighmaster and his assistants shall not be members of any Board of Trade or association of like character. They shall give bonds in the sum of \$5,000 each to the Board of Trade appointing them, conditioned for the faithful discharge of their duties, and shall receive such compensation for their services as said Board shall determine.

Sec. 20. The state grain inspector shall adopt such rules and regulations for the weighing of grain and other property as he shall deem proper.

Sec. 21. In case any person, warehouse or railroad corporation, or any of their agents or employees, shall refuse or prevent the aforesaid state weighmaster or either of his assistants from having access to their scales, in the regular performance of their duties in supervising the weighing of grain or other property in accordance with the tenor and meaning of this act, such person, warehouseman or railroad corporation shall forfeit the sum of \$100 for each offense, to be recovered in an action for debt before any justice of the peace, in the name of the state of Kansas, such penalty or forfeiture to be paid to the State Treasurer for the benefit of the state school fund, and such person shall also be required to pay all costs of prosecution.

Sec. 22. It shall be the duty of the Governor of this state to appoint a suitable person as state inspector of grain in the state of Kansas, who shall hold his office for the term of two years, unless sooner removed, and who shall, before entering upon the duties of his office, take an oath of office as in case of other state officers, and shall execute a bond to the state of Kansas in the penal sum of \$10,000 with good and sufficient sureties to be approved by the executive council, conditioned that he will faithfully and impartially discharge the duties of the office of state inspector of grain according to law, and that he will pay all damage to any person or persons who may be injured by reason of his neglect or failure to comply with the laws relating thereto.

Sec. 23. Every Board of Trade issuing licenses under the provisions of this act shall nominate, to be appointed by the state inspector, such number of deputy inspectors as may be required for the inspection of grain in that vicinity.

Sec. 24. Such deputy inspectors shall take a like oath of office to that required from the state inspector, and shall each give a bond to the state of Kansas in the penal sum of \$5,000, with such good and sufficient sureties as may be approved by the Board of Trade appointing them and with like condition as is required from the state inspector.

Sec. 25. The bonds given by the state inspector and the deputies shall be filed in the office of the Secretary of State for the state of Kansas, and suit may be brought upon said bonds in any court having jurisdiction thereof for the use of the person or persons injured.

Sec. 26. No state inspector or deputy inspector, weighmaster or assistant weighmaster of grain shall, during the term of service, be interested directly or indirectly in the handling, storing, shipping, purchasing or selling of grain, nor shall he be in the employ of any person interested in the handling, storing, shipping, purchasing or selling of grain.

Sec. 27. Upon complaint of any person in writing to the Board of Trade appointing the officers hereinafter named, supported by reasonable and satisfactory proof, that any deputy inspector, weighmaster or assistant weighmaster has violated any of the rules prescribed for his government, or has been guilty of any improper official act or conduct, or has been found inefficient or incompetent for the duties of his position, such officer shall be by said Board of Trade immediately removed from office; and for all cause and in like manner the state inspector shall be removed from office by the Governor upon proceedings had before him.

Sec. 28. Any person who shall assume to act as inspector or as a weigher of grain who has not first been appointed and qualified in accordance with the provisions of this act, shall be held to be an impostor, and deemed guilty of a misdemeanor, and upon conviction thereof shall be punished by a fine of not less than \$100 nor more than \$200, or by imprisonment in the county jail for a period of not less than thirty days nor more than ninety days, or by both such fine and imprisonment, for each and every attempt to inspect or weigh grain; all fines so collected to be paid into the state treasury for the use of the state school fund.

Sec. 29. Any duly authorized inspector or deputy in-

spector of grain who shall be guilty of any neglect of duty, or who shall knowingly or carelessly inspect or grade any grain improperly, or who shall accept any money or other consideration, directly or indirectly, for any neglect of duty or improper performance of his duty as such inspector of grain, or any person who shall improperly influence any inspector of grain in the performance of his duty as such inspector, shall be deemed guilty of a misdemeanor and on conviction thereof shall be fined not less than \$100 nor more than \$1,000, or shall be imprisoned in the county jail not less than thirty days nor more than one year, or both such fine and imprisonment in the discretion of the court.

Sec. 30. The charge for the inspection and weighing of grain shall be and constitute a lien on the grain so inspected or weighed, and whenever such grain is in transit the said charges shall be treated as advanced charges, to be paid for by the common carrier in whose possession the same is at the time of such inspection or weighing.

Sec. 31. The decision of the state inspector or any of the deputy inspectors as to the grade of grain shall be final and binding on all parties, unless an appeal is taken from such decision as hereinafter provided.

Sec. 32. In case any owner, consignee or shipper of grain, or any warehouse manager shall be aggrieved by the decision of the state inspector or any deputy inspector, an appeal may be taken to any Board of Trade having jurisdiction in that vicinity, and a decision of a majority of such Board shall be final; and Boards of Trade acting under the provisions of this act are authorized to make, each for itself, all necessary rules governing such an appeal. Provided that the party appealing shall pay the Board of Trade a sum not to exceed \$5 per case before said appeal be entertained, which sum shall be refunded in case such an appeal is sustained.

Sec. 33. In case any owner or consignee of grain shall be dissatisfied with the inspection of any lot of grain, or shall from any cause desire to receive his property without it passing into store, he shall be at liberty to have the same withheld from going into the public warehouse (whether the property may have been previously consigned to such warehouse or not) by giving notice to the person or corporation in whose possession it may be at the time of giving such notice; and such grain may be withheld from going into store and be delivered to him, subject only to such proper charges as may be a lien upon it prior to such notice; the grain in railroad cars to be removed therefrom by such owner or consignee within twenty-four hours after such notice has been given to the railroad company having it in possession. Provided, such railroad company place the same in a proper and convenient place for unloading; and any person or corporation refusing to allow such owner or consignee to receive his grain shall be deemed guilty of conversion and shall be liable to pay such owner or consignee double the value of the property so converted. Notice that such grain is not to be delivered into store may also be given to the proprietor or manager of any warehouse into which it would otherwise have been delivered, and if after such notice it be taken into store in such warehouse, the proprietor or manager of such warehouse shall be liable to the owner of such grain for double its market value.

Sec. 34. It shall be unlawful for any proprietor, lessee or manager of any public warehouse to enter into any contract, agreement, understanding or combination with any railroad company or other corporation, or with any individual or individuals, by which the property of any person is to be delivered to any public warehouse for storage or for any purpose contrary to the directions of the owner, his agent or consignee.

Sec. 35. The state inspector, together with a representative from each Board of Trade carrying on business under the provisions of this act, shall before the 15th day of September in each year establish a grade for all kinds of grain brought or hauled by any public warehouse in this state, which shall be known as "Kansas grades," and the grades so established shall be published in some daily newspaper in each city where there is a licensing Board of Trade each day for a period of one week.

Sec. 36. It shall be the duty of the state inspector of grain to furnish any public elevator or warehouse in this state standard samples of the several grades as established by official inspection, when requested so to do by the proprietor, lessee or manager thereof, at the actual cost of such samples.

Sec. 37. It shall be the duty of the state inspector to assume and exercise a constant supervision over the grain interests of the state; to supervise the handling inspection, weighing and storage of grain; to establish such necessary rules and regulations for the weighing, grading and inspection of grain as have not otherwise been herein provided for, and for the management of the public warehouses of the state, as far as such rules and regulations may be necessary to enforce the provisions of this act or any law of this state in regard to the same; investigate all complaints of fraud or oppression in the grain trade, and correct the same so far as it may be in his power. Provided, that nothing in this section shall be construed as delegating any power or authority to said state inspector inconsistent or in conflict with the powers and authority delegated to other persons by the provisions of this act.

Sec. 38. The aforesaid rules and regulations so established by said inspector, not being contrary to the provisions of law, shall be published by said inspector for the period of one week after their adoption in a daily paper in every city having a licensing Board of Trade, and shall be in force and effect until they shall be changed or abrogated by said state inspector in a like public manner.

Sec. 39. The state inspector shall have a salary of \$2,000 per year, said salary to be paid by the several Boards of Trade in using licenses under the provisions of this act, per rate [pro rata], in proportion to the number of cars of grain inspected and weighed by each Board; the deputy inspectors to be paid by the Board of Trade under which each holds his appointment in such manner as it shall determine.

Sec. 40. The Attorney-General of the state of Kansas shall be ex officio attorney for the state inspector, and shall give him such counsel and advice as he may from time to time require, and said Attorney-General shall institute and prosecute all suits which said state inspector may deem expedient and proper to institute, and he shall render to said state inspector all counsel, advice and assistance necessary to carry out the provisions of this act according to the true meaning and intent thereof. In all criminal prosecutions against a warehouseman for a violation of any of the provisions of this act, it shall be the duty of the county attorney of the county in which such prosecution is brought to prosecute the same to a final issue.

Sec. 41. Nothing in this act shall be construed so as to prevent any person from selling grain by sample, regardless of grade, but the provisions of this act shall not change the liabilities of the warehouseman on grain row in store nor the inspection thereof, but said inspection shall be had under the same system under which it was received into store.

Sec. 42. All grain grown in the state of Kansas and stored in any public elevator or warehouse in said state must be weighed by a weigher and inspector provided for in this act, and such weighing and inspecting shall be final as between the parties interested, subject to appeal as hereinbefore provided.

Sec. 43. All acts and all laws inconsistent with the provisions of this act are hereby repealed.

Sec. 44. This act shall be in force from and after its first publication in the official state paper.

Approved March 6, 1891.

ITEMS FROM ABROAD

Portugal has prohibited the importation of wheat until the home crop is consumed.

The crop just harvested in Italy is equal to that of 1890. Indian corn is doing well.

Advices from Odessa state that a partial embargo will be placed on the exportation of oats.

A fall in the price of rye took place recently when the German government ordered that wheat meal be used instead of rye for army bread.

France produced 26,724,000 quarters of oats in 1890, 29,397,000 in 1889, 29,296,000 in 1888, 27,626,000 in 1887, and 30,789,000 quarters in 1886.

A good harvest is expected in Southeastern Russia. Rates have been reduced one-half to facilitate the transportation of grain from one part of the country to another.

The rye crop of Serbia will, it is estimated, be one-fifth larger than last year's, and 1,000,000 bushels will be available for export. Of wheat, about 7,500,000 bushels can be exported.

Peru has been cut off from wheat supplies from Chili during the civil war in the latter country. The steamer Elder arrived at Callao recently with a cargo of wheat from San Francisco just in time to replenish supplies.

The rice cleaning trade of Italy received its death blow when the government prohibited the temporary importation of rice in bond to be cleaned. The rice growers have not, however, been benefited by the destruction of the rice cleaning trade.

Russian grain exporters follow a vicious practice of wrongly stating to foreign consignees the quality and quantity of wheat shipments. This abuse has resulted in the Russian government's appointing officers to see that buyers receive what they order.

Russia's rye crop was 675,325,000 bushels last year, against 458,595,000 bushels this year, and as the requirements are 641,130,000, a deficit of 182,585,000 bushels is apparent. It is evident that to make up this deficiency less wheat will be exported than last year.

The flaxseed crop of Central India was injured by bad weather a few weeks before harvest, and owing to a decrease in acreage the crop is estimated at 53,700 tons, against an average of 63,427 tons for the five years preceding. The acreage in other districts has been considerably increased.

Alexandria, Egypt, received from April 1 to Aug. 1, 1,896,000 bushels wheat and 2,752,000 bushels corn, against 928,060 bushels wheat and 8,000 bushels corn in the same period of 1896. Shipments from that port during the four months preceding Aug. 1 were 1,280,000 bushels wheat and 2,768,000 bushels corn, against 640,000 bushels wheat and no corn in the same months of 1890.

Latest Decisions.

Overloading Rented Premises.

When a person rents the property of another, he takes it subject to an implied contract that he will properly use it for the purposes for which it was leased, and when a tenant places a load in a building which, in the exercise of ordinary judgment, he should know is more than the building will hold, he is liable for any damage resulting to the premises from such overloading.—*Chalmers vs. Smith, Supreme Judicial Court of Massachusetts.*

Delay in Collecting Check.

A check drawn by a depositor upon his bank must be presented with diligence. Where a person received a check from another, and instead of presenting it for payment sent it to a third person, to whom he was indebted. A delay of several days occurred in presenting the check for payment, and when presented it was protested for lack of funds. This relieved the maker from liability on the check, and placed the parties in their original position as to their various liabilities to each other.—*Curtis & Co. Mfg. Co. vs. Douglas, Supreme Court of Texas.*

Sale of Goods Under Warehouse Lien.

Where goods are held in a warehouse subject to accruing charges, the warehouseman has a right to sell so much of the property as may be required to satisfy the claim for charges, but if more goods are sold than are required to satisfy the claim for storage earned at the time of the sale, it amounts to a conversion as to the excess so sold and the seller is liable for the value of such excess. It is incumbent on the warehouseman to show his right to sell the articles sold, and failing to do this he will be held liable for all the goods sold.—*Jesurun vs. Kent, Supreme Court of Minnesota.*

Release of Railroad Company from Damage to Freight by Fire.

Where a bill of lading provides that the railroad company shall not be liable for any loss or damage to the goods shipped thereunder by fire, the company will still be liable for loss resulting from fire caused by the negligence of its servants, and the burden of proof is on the company to show that the loss was within the exception, in addition to which it must be shown that the fire was one for which it was not responsible. In the absence of proof as to how the fire originated, the presumption is against the company.—*Missouri Pacific Railway Co. vs. China Mfg. Co., Supreme Court of Texas.*

Inaccurate Statements in Application.

In the case of the Phoenix Insurance Company vs. Weeks, it was shown that an application for fire insurance described the building as an "elevator," and stated that a watchman was kept on the premises at night, and that no other duty was required of him. The building contained machinery for grinding grain, which was not mentioned in the application. The insured and eight or ten other business men employed a private watchman to guard their property at night. The facts were known to the local agent of the company, who filled out the application, and told the insured that it was correctly done. The latter read the application and signed it. The Supreme Court of Kansas held that the company could not avoid liability on account of the inaccurate statements in the application.

Damages for Failing to Fulfill Contract.

The Supreme Court of Kansas recently decided, in the case of the New York Draper Mercantile Company vs. Lush, that in an action by the buyer against the seller for breach of contract for the delivery of corn, the measure of damages is as a general rule the market value of the corn at the time and place of delivery less the contract price. In such case, when the seller after this contract of sale is made, notifies the buyer that he will not fill the contract, in the absence of any evidence on the part of the seller that the buyer, after notice that the seller would not fill the contract and before the date of delivery, could have purchased the corn in the market of the place of delivery upon such terms as to have mitigated his loss, the measure of damages remains the same.—*Drovers' Journal.*

Landlord and Tenant—Sale of Grain.

A party engaged in the business of buying and selling grain in Illinois in August and December bought in the regular course of business oats and corn of a tenant amounting to \$227, which was paid for at the time. The purchase was in the ordinary course of business, without any notice that the vendor was a tenant or that the grain was raised upon rented premises, and there were no facts or circumstances shown to put the purchaser on inquiry. The tenant being indebted for the rent, his landlord sued the purchaser personally for the value of the grain, and it was stipulated that any proof showing a right of recovery in any form of action should be admitted. The Supreme Court of Illinois held, in the case of Finney vs. Harding, reported in the *Chicago Legal News*, that the plaintiff could not maintain the action. The court said that a bona fide purchaser of grain from a tenant, without notice of the landlord's lien thereon for unpaid rent,

or of facts sufficient to put him on inquiry, will not be liable to the landlord for its value in a personal action, but the landlord may still levy his distress warrant on the grain if it can be found and identified.

Care of Property in Transit.

In the case of Armstrong vs. the Chicago, Milwaukee & St. Paul Railway Company the Supreme Court of Minnesota held that a complaint in an action against a common carrier to whom property had been delivered for transportation, alleged negligence in the care of the property while in transit and also after it had arrived at its destination and remained in the custody of the carrier as warehouseman. This constituted only one cause of action. Evidence of general custom, or of the amount of care exercised by men in general in similar circumstances is competent on the question whether a person exercised ordinary care in the custody of a bailment. A witness having special knowledge on the subject, derived from experience in the business, may give his opinion whether a particular course pursued with reference to a special class of freight was proper or not.

Warehouse Receipts—Transfer.

The indorsement and transfer of warehouse receipts for wool will not constitute a valid or legal pledge of the wool for which they are hypothecated, if the company issuing such receipts has no possession and control of the wool, or the wool therein named has not been so set apart and distinguished that it can be found and identified by the receipts, according to the decision of the Supreme Court of Illinois, in the case of the Union Trust Company vs. Turnbull et al., of which an abstract appears in the *Legal News* of Chicago. It appeared in this case that after the transfer in pledge of warehouse receipts in wool in the possession and control of the pledgor, and not set apart from other wool, the pledgor made an assignment for the benefit of creditors, and the assignee took possession, the company issuing the receipts for the property by a ruse entered the building and placed an agent in charge of the wool, the assignee also still holding possession. The court held that the possession thus obtained by the company was insufficient to support the warehouse receipts previously issued by it.

Liability for Errors in Transmitting Messages.

A decision of considerable interest to the business public has been rendered by the New York Court of Appeals with reference to the liability of telegraph companies for errors in the transmission of unrepeatable messages. A customer addressed a telegram to T. W. Pearsall & Co., brokers, ordering them to buy for him a thousand shares of Western Union stock. By mistake the dispatch as delivered was addressed to T. W. Pearsall individually. No one in the office had authority to open his telegrams, and the message remained unread until the following day, when the price of a thousand shares of Western Union had advanced some \$1,700. Suit was brought against the company to recover the sum. It appeared that the message was written on one of the ordinary blanks of the Western Union Telegraph Co., at the head of which is a notice to the effect that the company will not be responsible for errors unless the message is repeated at the cost of the sender. The customer who sent the present dispatch was accustomed to use these blanks, and had at all times a block of them on his desk, but he was not shown ever to have read the notice. The court decided that he was not bound by the notice, and that he could recover damages in spite of it. A mere notice can have no effect unless it is assented to by the customer. If the notice provides two different rates of charge according to the liability accepted, the customer, if he explicitly chooses the lower rate, may be taken to have contented himself with the lesser degree of responsibility on the company's part; but it is not reasonable to be supposed that the company can impose upon him the duty of reading a long announcement in fine print relative to the contract entered into by him. He is not bound to read such notices. If the company desires to bind him to the terms therein stated, the agent must acquaint him with the nature of such terms. Busy men are entitled to deliver their messages and have them transmitted at once upon the contract implied by the nature of the service, and if the company desires to make any other or different contract it must do so by some more explicit method than a general notice which nobody reads.

Bill of Lading—Construction.

A bill of lading recently construed by the New York Court of Appeals acknowledged the receipt on board a vessel of a common carrier of 54,000 bushels of wheat to be delivered at Buffalo at $3\frac{3}{4}$ cents freight per bushel, and contained the provision "all the deficiency in cargo to be paid by the carrier and deducted from the freight, and any excess in the cargo to be paid for to the carrier by the consignee." The carrier only delivered 53,173 bushels. The court held (Rhodes vs. Newhall) that the consignee was entitled to have the value of the deficiency deducted from the stipulated freight on the 54,000 bushels. The court said: "It seems reasonable that parties should agree upon the quantity of grain shipped for transportation to distant markets with a view of avoiding controversies between the carrier and consignee upon the subject. The cargo was here weighed into the vessel under the supervision and control of the carriers, and they had every opportunity to learn the quantity of grain actually received by them. They thereupon entered into a contract with the consignor whereby it was agreed that

any deficiency in the cargo should be paid for by them, and deducted from the freight, and any excess in quantity should be paid to them by the consignee. The deficiency and excess referred to could have related only to a variation from the quantity specified in the bills of lading, as there was no other standard furnished by which a variation could be estimated. This was a contract which the parties were competent to make and a consideration for the promise to pay for any deficiency was secured by the right to collect the value of any excess. These were mutual obligations and were obviously incurred for the purpose of avoiding disputes over the quantity actually received by the carrier, and to estop him from disputing the correctness of his acknowledgment. The parties plainly contemplated the contingency of a variance in the course of transportation between the quantity of grain admitted to have been received by them and that subsequently delivered, and provided in express terms the mode by which their respective rights should be adjusted in that event. The language of the contract is plain and unambiguous, and the right of the parties to make it is indisputable."

OBITUARY

Alfred N. Chamberlain, grain dealer of Decatur, Mich., died Aug. 7.

Samuel F. Pearce of Pearce & Bowen, dealers in grain and cotton at New Orleans, La., is dead.

J. K. Boies of J. K. Boies & Co., dealers in grain, wool and produce at Hudson, Mich., is dead.

Jacob F. Lantz of Samuel Elder & Co., grain and flour dealers at Baltimore, Md., died Aug. 26, after a long sickness.

Perry Crabbs died at Toledo, O., recently. He had been engaged in the grain trade for many years and for a long time was connected with the late W. H. Bellman.

J. F. Smyth, engaged on *Beerbohm's Daily Corn Trade List* at Liverpool, died Aug. 21. He was a familiar figure on Mark Lane Exchange and was highly esteemed by his many friends.

John M. Chamberlain, a grain dealer and member of the New York Produce Exchange, died Aug. 24, aged 60 years. He was connected with D. D. Mangam and formerly he was a member of the firm Holliston & Chamberlain.

Enoch Holmes of Minneapolis, Minn., died Aug. 17, aged 62 years. He went to Minneapolis in 1854, and has been engaged in the milling and elevator business for many years. He was at the head of the St. Louis Elevator Company, and formerly with his brother, Capt. Henry Holmes, was associated in the "Northwestern Mill." A wife and two children mourn his death.

Clark Woodman died Aug. 20 in a room of the Grand Pacific Hotel in Chicago. The circumstances pointed to suicide, but it is not certain that he took his own life. Mr. Woodman was a prominent business man of Omaha, Neb. He was born in Schuyler County, Ill. He superintended the Flint & Thompson elevators in Chicago from 1857 to 1867, when he went to Omaha. In 1872 Messrs. Woodman, Robert K. Taft and H. H. Harris began to manufacture linseed oil. Four years later the latter died, and in 1881 Mr. Woodman bought Mr. Taft's interest and organized the Woodman Linseed Oil Company, afterward changed to the Woodman & Ritchie Company, composed of Woodman, F. E. Ritchie and C. L. Harris of Chicago. The firm did a large business in linseed oil, and also operated a system of elevators on the Burlington & Missouri Railway.

Shipments of wheat and flour from San Francisco during August, the flour being reduced to wheat cents, aggregated 1,637,000 cents, of the value of \$2,742,000. Total exports of wheat and flour since Jan. 1 aggregate 13,178,000 cents, valued at \$20,163,000, as against 11,158,000 cents, valued at \$14,718,000, for the corresponding period of 1890.

A whole field of wheat in Kingman County, Kan., was stolen recently. John Myrick, a farmer in the southwestern part of the county, cut and stacked the wheat crop of some land he had rented near Norwich, and went home. A man calling himself Myrick engaged a threshing outfit, had the grain carted away and sold, and left town with the proceeds in his pocket.

"What do you think?" remarked a machinery man, "a Missouri farmer wrote us the other day asking if we had a machine that would separate black beans from white beans. I sent the letter to a fanning-mill house with the observation that this chap must be a relative of the ambitious woman who inquired of the Patent Office if a patent had ever been granted on a diaper."

A queer law was passed at the last session of the Prussian Landtag, providing for the compensation of agriculturists whose crops have been damaged by game. One would think that the owners of the destroying animals should make good all losses; but this law makes the farmer whose crops are not damaged pay the farmer whose crops are damaged by the game. The nobility own the game, and they are the lawmakers.

MIXING BARLEY.

It is a well-known fact, says a prominent barley dealer of Chicago, that barley grown in different states or localities differs widely in character. Iowa barley, for instance, being of the scotch variety, is big berried and coarse skinned; Minnesota barley is small berried and thin skinned, and it is easy to see that to accord both kinds the same treatment in the malt house—in other words, to malt them together—would certainly be productive of unsatisfactory results.

The system of trading in Western barley ordinarily followed takes no account of these differences in barley varieties, but the grain from the different states is indiscriminately mixed, one of the main causes that have led to dissatisfaction among Eastern maltsters who use Western barley.

The Western maltster is cognizant of the above facts, and is careful to purchase only unmixed grain, and it would certainly prove a decided and practical benefit to the Eastern consumer of the same article and exercise a salutary effect on the mixers if he could secure at the principal barley shipping points the services of a skilled buyer of Western barley who would execute his orders for him.

SPECIAL ANNOUNCEMENT

TO THE TRADE we desire to say, that for the past sixty days orders for **Morton Tread Powers** have crowded in on us so fast that with the interruption of production, incident to removal of factory of the manufacturers of same, from Romeo, Michigan, to Muskegon in same state, it has been with great difficulty we could supply the demand fast enough to satisfy orders. We now desire to announce to those Elevator Architects, Contractors, and Builders ESPECIALLY, who have so liberally ordered of us of late, and to the trade generally, that the factory are now fully settled in their new and commodious buildings at Muskegon, and we, *their Sole General Agents*, are authorized to say that we are now in position to supply the demand promptly, hence we solicit a continuance of orders, and can guarantee more prompt service in the future than has been possible for sixty days past. Address all orders carefully to

Yours truly,

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Miscellaneous

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I will sell two hopper scales of the Howe make. They are in perfect order, but I cannot use them as I am about to put in two dumps and therefore must sell. Address

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A horse power elevator of 5,000 bushels' capacity, located in the fertile Elkhorn valley, thirty one miles from Omaha, for sale. Only elevator in town. Owned by a stock company that wishes to sell. Address

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I have for sale in good order: One Cluteh; one No. O Band one No. G Nonpareil Feed Mills; one No. 2 Magic Feed Mill; one No. New 4½ Scientific Feed Mill; one No. 2 Morgan Scourer; two 5 ft. by 32 in. and one double 6 ft. 6 in. by 30 in. hexagon scalping reels, etc. Address

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Will sell one-half, or controlling interest in a system of public elevators with a joint capacity of over 1,000,000 bushels and situated in a great cereal state that has more than doubled in acreage within last year, and the only public elevators in the state. Reason for selling, declining health. Correspondence solicited. Address

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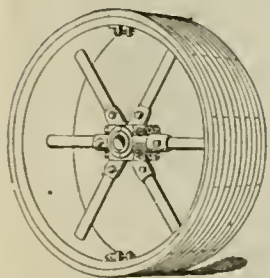
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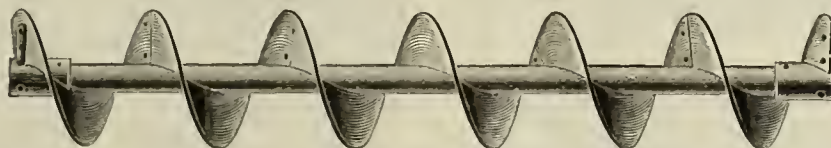


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Wood Split Pulleys,
With Iron Hubs
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Will Not Slip on
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127, 129, 131, 133 WEST WASHINGTON STREET, - CHICAGO, ILL.



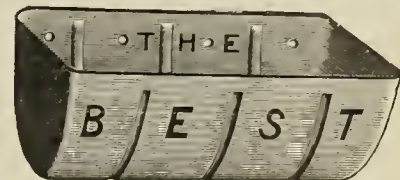
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AUTOMATIC POWER GRAIN SHOVELS.

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SEAMLESS STEEL
ELEVATOR
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SPROCKET WHEELS, LINK BELTING, COTTON, RUBBER AND LEATHER BELTING, ELEVATOR BOOTS,
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THIS YEAR YOU DO WANT THE BEST.

You want Grain Separators this year, that you can absolutely depend upon for

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These features are found in the very highest perfection in the old established and always reliable

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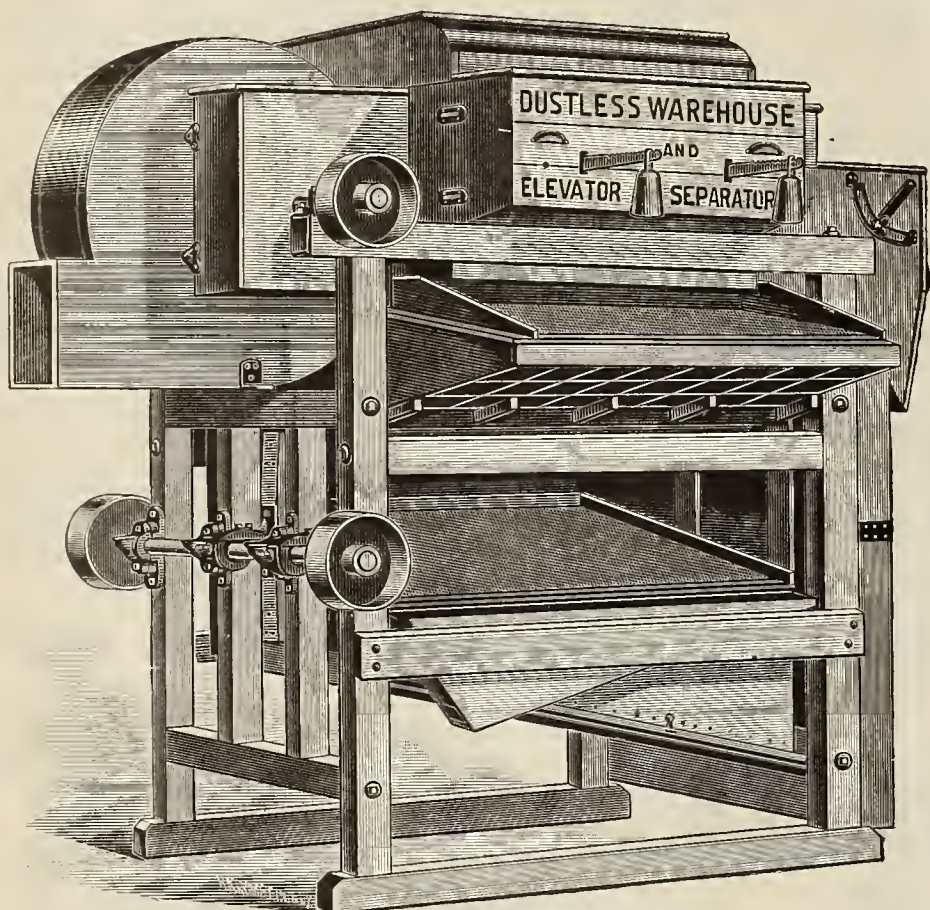
Of this style of machine, which is known as the

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— AND —

ELEVATOR SEPARATOR.

We build 8 regular sizes and the capacities range from 140 bushels up to 2,000 bushels per hour. This is not bluff nor blow. The capacity of each machine is absolutely guaranteed.



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QUALITY OF OPERATION THE BEST.

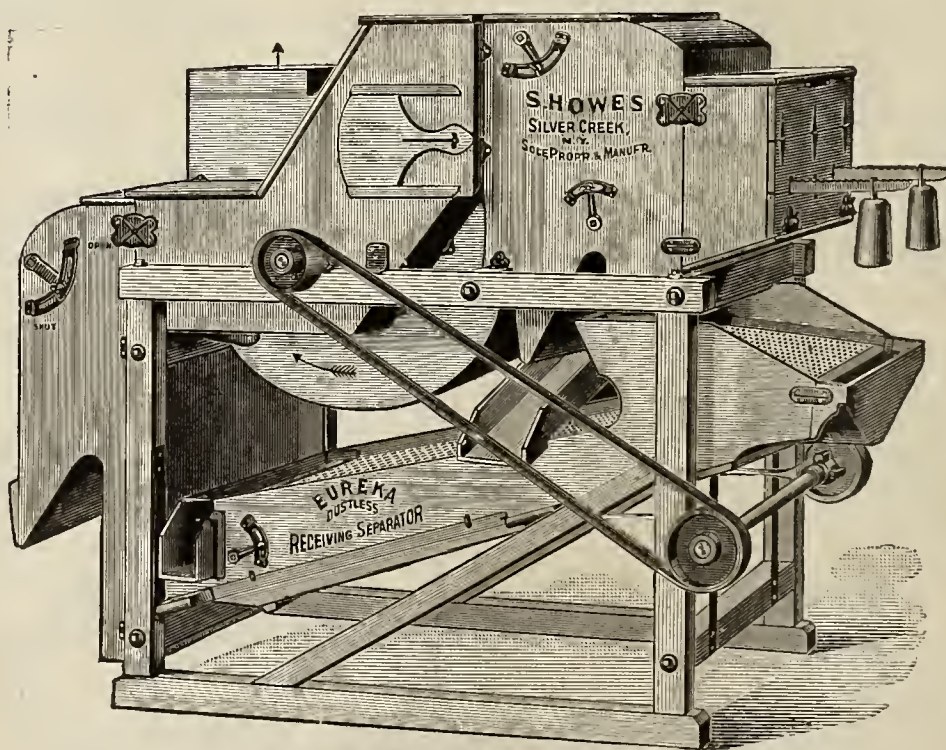
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DOUBLE RECEIVING SEPARATOR,

We build 7 regular sizes and the capacities range from 150 bushels per hour to 2,400 bushels per hour. Here, again, you can depend absolutely upon the specified capacities. They are guaranteed every time.

Don't forget that, for Warehouse and Elevator use, we build the greatest line of grain-cleaning machinery, in every possible size and style, to meet requirements general or special. Our prices are low, too low, in fact, but that's to your advantage.

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MOST DURABLE AND ACCURATE AUTOMATIC SCALE ON THE MARKET.

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THE WORK DONE

By THE J. B. DUTTON AUTOMATIC GRAIN, FLOUR AND FEED SCALE.
is attested by the accompanying unsolicited testimonials:

BELOIT, WIS., Jan. 31, 1891.

MR. J. B. DUTTON, Detroit, Mich.

DEAR SIR:—In March, 1889, I purchased from you three of your Automatic Scales, one No. 4 and one No. 5 grain, and one feed scale. These have been in constant use since that time, and work as accurately now as they did the day we set them up. As yet they show no signs of wear. We are well pleased with the scales, and can recommend them as accurate and durable.

Yours truly, WILLIAM BLODGETT.

GRAND RAPIDS, MICH., Feb. 28, 1891.

J. B. DUTTON, Esq., Detroit, Mich.

DEAR SIR:—The Automatic Grain Scale, that you sent us, more than meets our expectations as a scale. We are using it for the purpose of weighing beans from cars. We have weighed something like 40,000 bu. in the past three months, and have yet to find the time when it did not do its work correctly.

Its being automatic makes its own register, requires no attention whatever, and we cheerfully recommend it to the public as the scale for warehouses and elevators.

Very respectfully,
W. T. LAMOREAUX & CO.

DELAWARE, ILL., March 7, 1891.

MR. J. B. DUTTON, Detroit, Mich.

DEAR SIR:—We have been running one of your Automatic Grain Scales for the past 6 months and find they work and weigh grain correctly. We weigh the grain from the stock hopper to the rolls, thereby enabling us to know how much cleaned wheat it takes for a barrel of flour. We can recommend them to all millers.

Yours truly, F. STARZ & SON.

SAGINAW, MICH., March 5, 1891.

J. B. DUTTON, Esq., Detroit, Mich.

DEAR SIR:—Replying to yours of the 4th will say that the Automatic Grain Scale we bought of you has been in almost constant use for over a year, and we find by frequent tests that they are very correct and reliable in ascertaining the amount of wheat ground each day.

Yours truly, BRAND & HARDIN.

DULUTH, MINN., March 30, 1891.

J. B. DUTTON, Esq., Detroit, Mich.

DEAR SIR:—Replying to yours of the 18th, regarding your Automatic Scales, will say, that we have been using them in our mills and they have given perfect satisfaction.

We have made frequent thorough tests, and find that they are very accurate in weighing.

Respectfully yours, GILL & WRIGHT.

ELDRIDGE MILLING CO.,
JACKSON, MICH., April 3, 1891.

J. B. DUTTON, Esq., Detroit, Mich.

DEAR SIR:—Replying to your favor of the 2d regarding your Automatic Scales which we are using on feed in our mills, am pleased to say that they are entirely satisfactory in every respect. We have tested them a great many times and find that they weigh very correctly. In matters of yields and percentages they are indispensable.

Wishing you every success with them, we are,
Yours truly, ELDRIDGE MILLING CO.

WALLA WALLA, WASH., March 9, 1891.

J. B. DUTTON, Esq., Detroit, Mich.

DEAR SIR:—Replying to your favor of March 4, will say, the new Automatic Scale you sent us last fall has since been in constant use, and works to our entire satisfaction.

Yours truly, H. P. ISAACS, Manager.

THE ISAAC HARTER CO.,
FOSTORIA, OHIO, June 19, 1891.

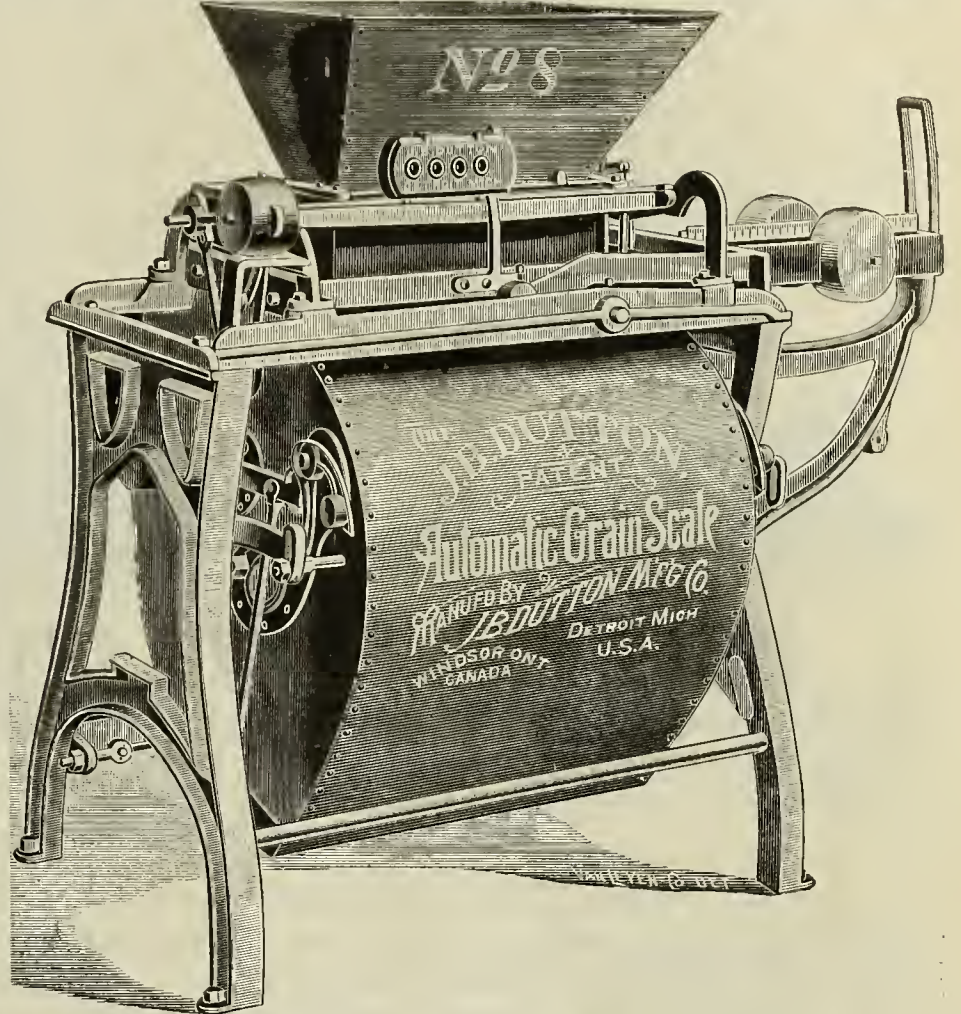
J. B. DUTTON, Esq., Detroit, Mich.

DEAR SIR:—The new register you sent us at the beginning of the year has been in constant use and works to our entire satisfaction.

As regards another testimonial, can only say that your Automatic Scale has been in operation in our mill for over a year, weighing all the feed we made during that time. Its correctness is no longer a question of doubt with us, having tested it both by grinding out all the wheat on hand, and by taking frequent drafts which, on Fairbanks or Howe Scales, show 100 pounds to each dump, the regular weight of each discharge from your No. 5 scale.

Yours truly,
THE ISAAC HARTER CO.,

A. MENNEL, Sec'y and Supt.



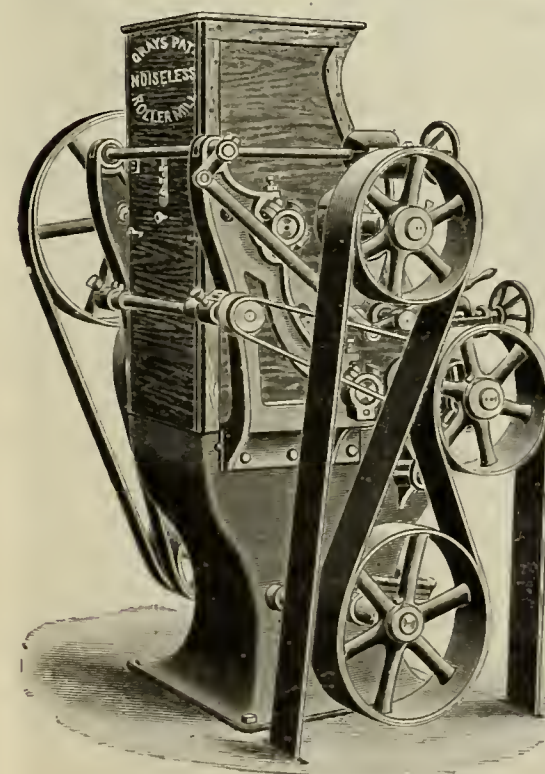
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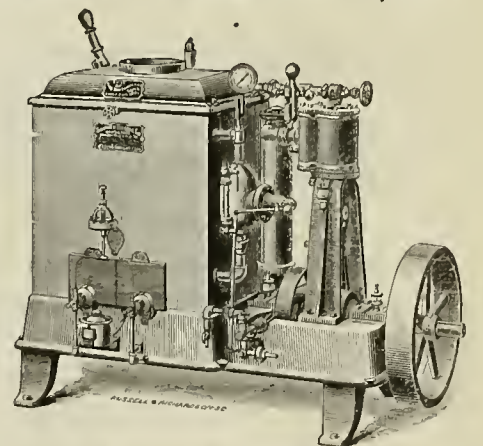
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And we therefore take it as a further compliment to the "SALEM" Bucket that some of its old patrons who were induced to try the imitations have now returned to the "SALEM" Bucket, thereby acknowledging it to be the most satisfactory. Don't be deceived by other makes of Buckets that are claimed to be "just as good." Insist upon having the Original and Reliable Salem Bucket. All legitimate Salem Buckets are plainly marked with the word **SALEM.**

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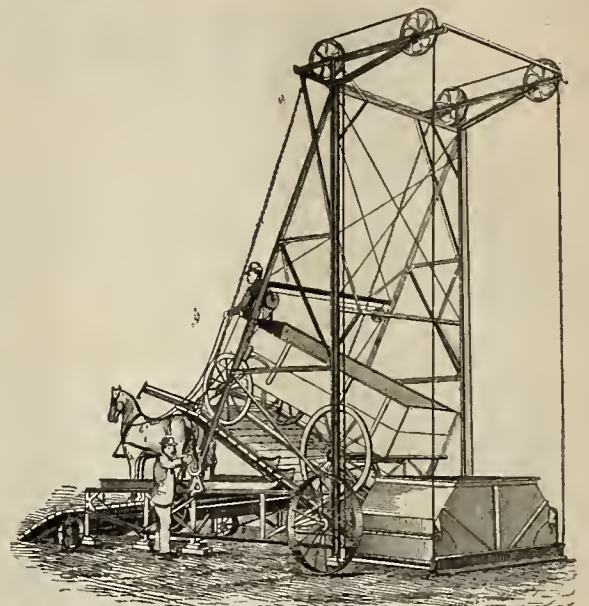
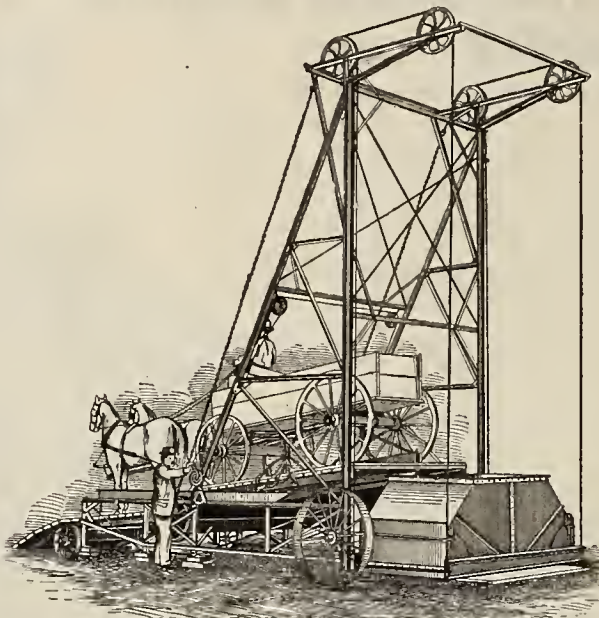
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For Dumping and Elevating from either **SLEDS** or **WAGONS**

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NO JERK ON HORSE OR JAM OF WAGON.

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See the descriptive article in another part of this paper.

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Up to this writing we are not aware of any American maker who can give us the quantity we daily require, and the all-important guarantee required by this house; nor is it reasonable for us to expect it at this early period.

It must be known that months of time, thought and considerable money were expended by us before the best plates known to the American trade were put upon the market, and we assure the trade—**NOW** as we did **THEN**—that reputation with us is paramount. We shun misrepresentations just as we avoid their results, viz.: unenviable notoriety.

As soon as we can secure American plates **EQUAL TO THOSE WE NOW GUARANTEE, OUR PATRONS SHALL HAVE THEM**; but we wish it understood that **OUR** idea of manufacturing tin plates is not that of **DIPPING** a plate made elsewhere and the use and **ABUSE** of a stamping machine. Anyone familiar with the tin plate business knows full well such a plant (?) can be erected and in operation in a few days.

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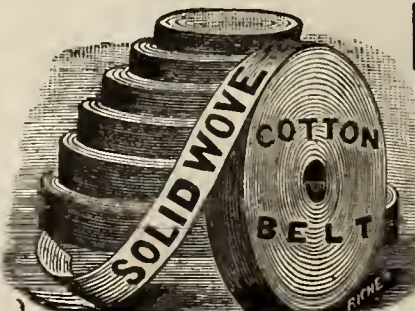
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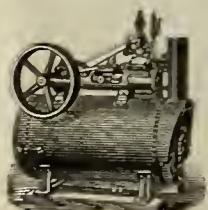
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the bursting of a bin or from the settling of the house. We have our spiral grain conveyors made to
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If you intend to build a grain elevator, write to us, stating the storage capacity required, and
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We have no stereotype plans, for the plans of an elevator differ, to suit the location and the work to
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Please write for our descriptive circular.

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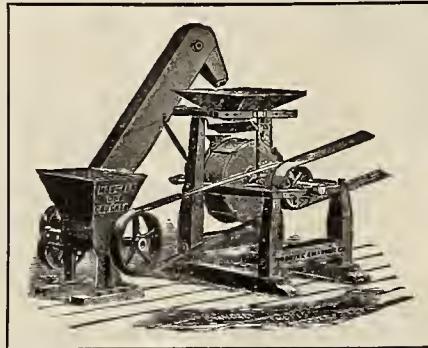
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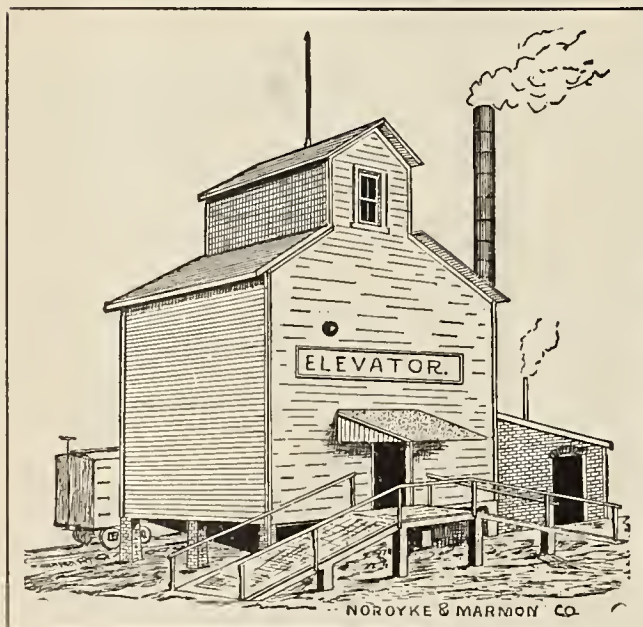
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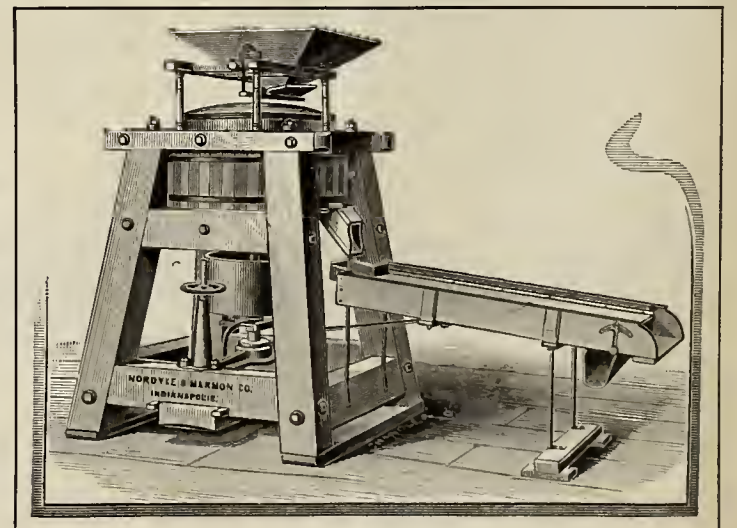
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Warehousemen will do well to buy one to sell to farmers as I will give exclusive right to only one man at each station to sell. Warehousemen will please paste this up in warehouse where farmers can see it.

Send for descriptive circular and references.
JOSEPH LEASER, Patentee and Manufacturer, Dumont, Minn

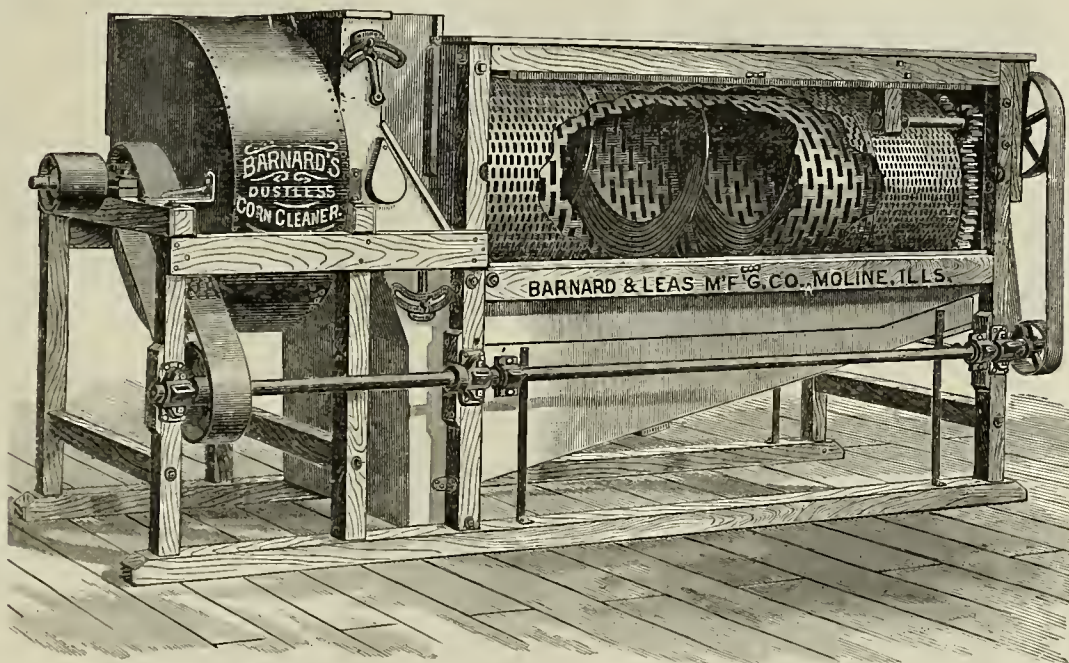
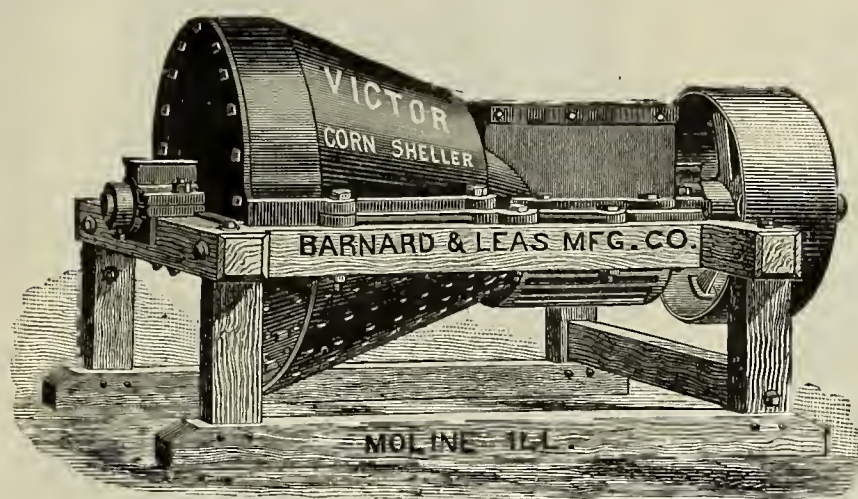
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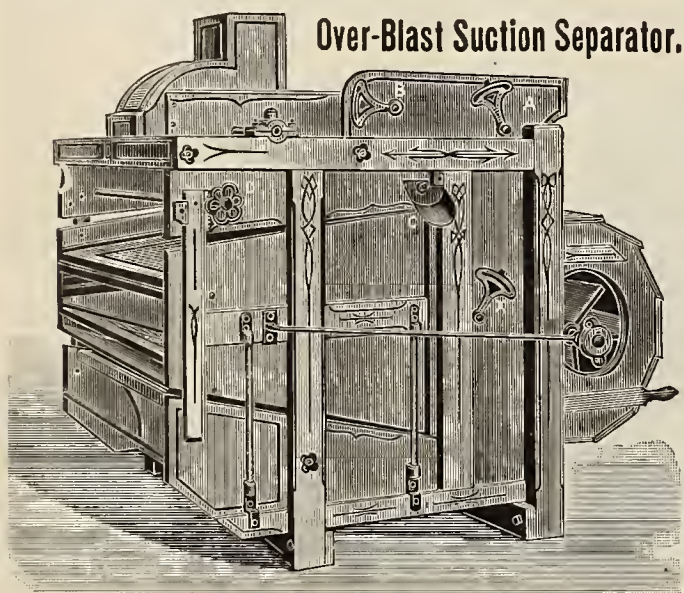
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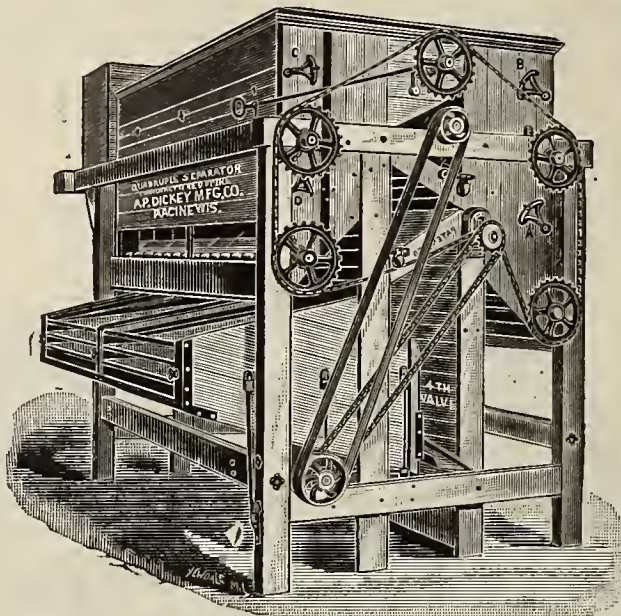
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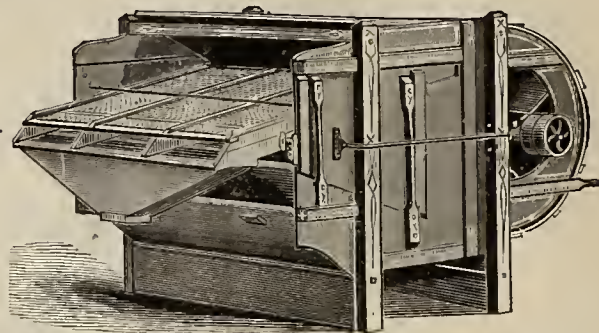
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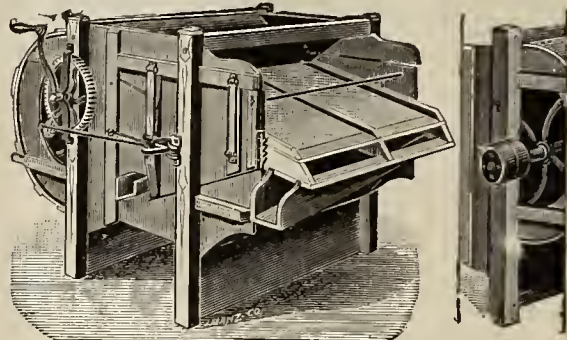
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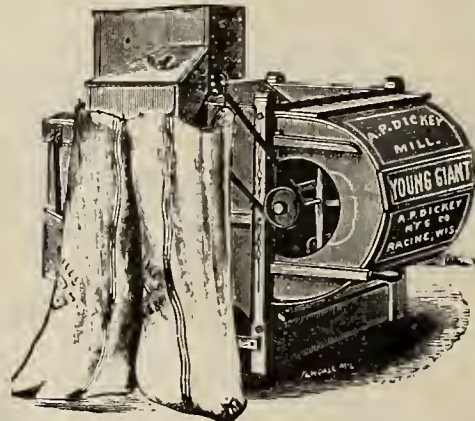
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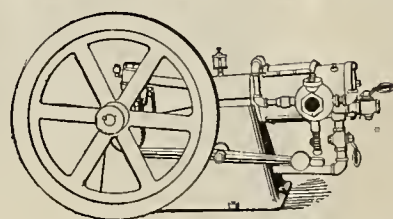
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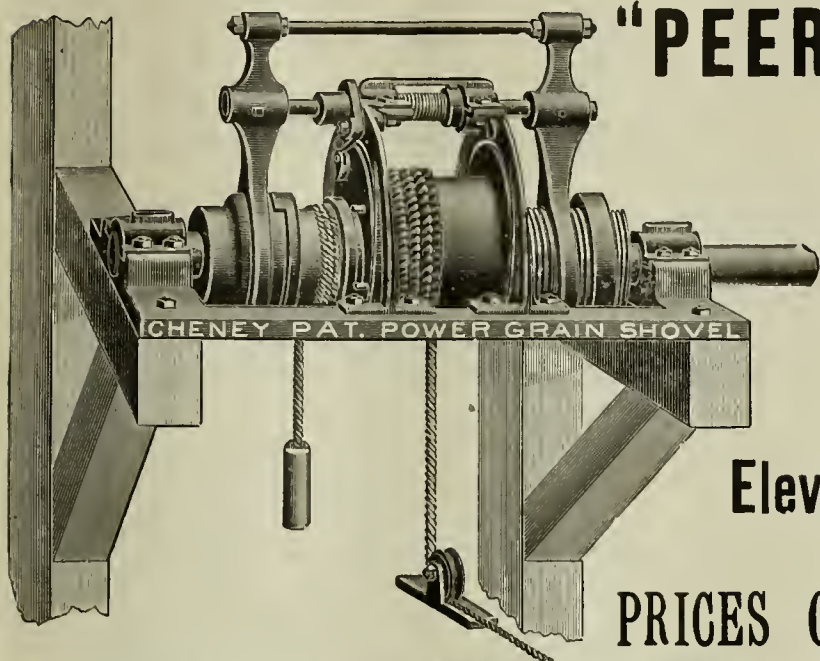
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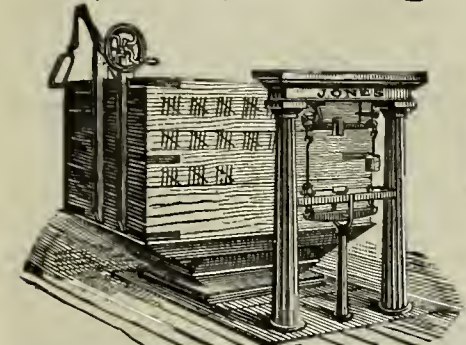
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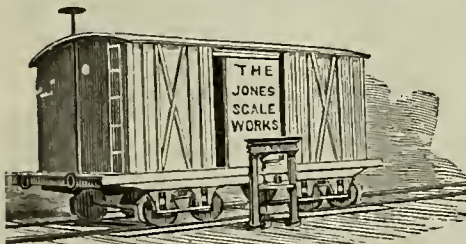
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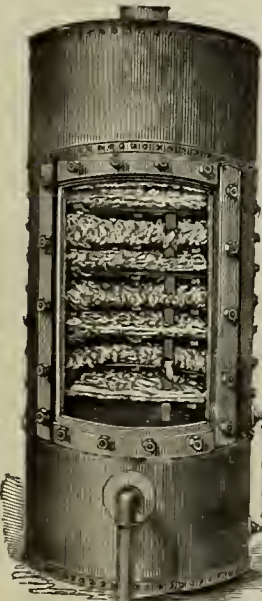
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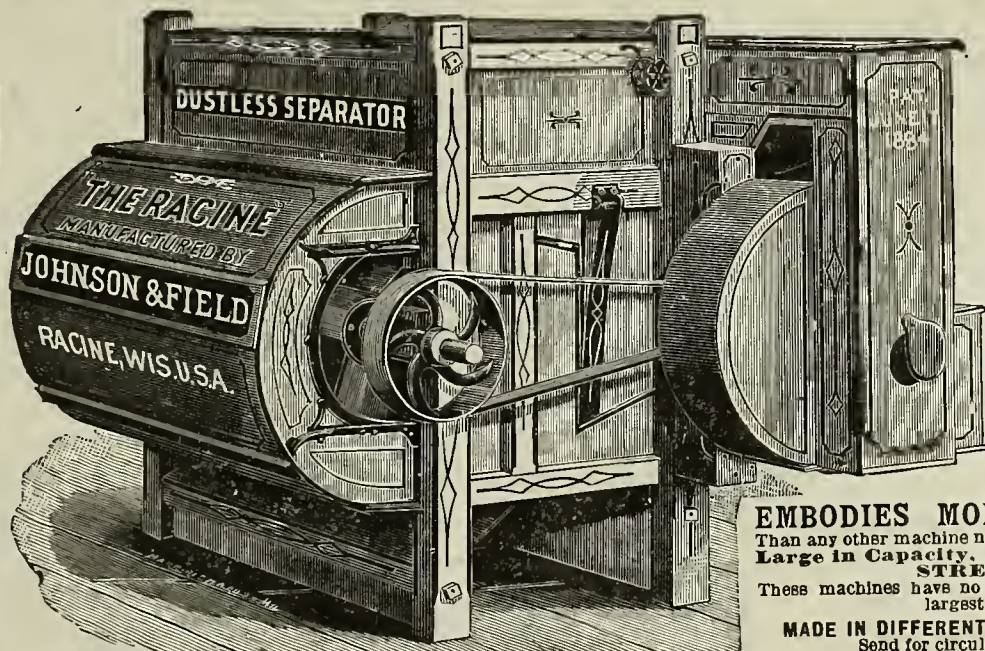
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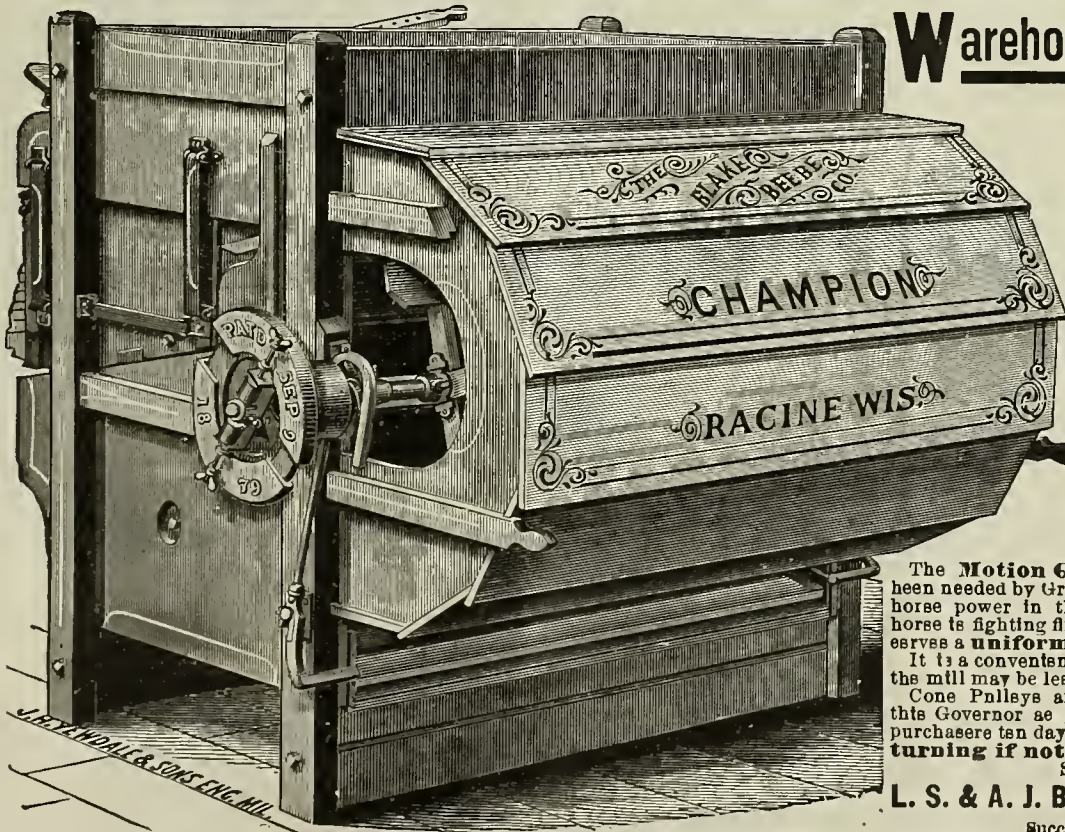


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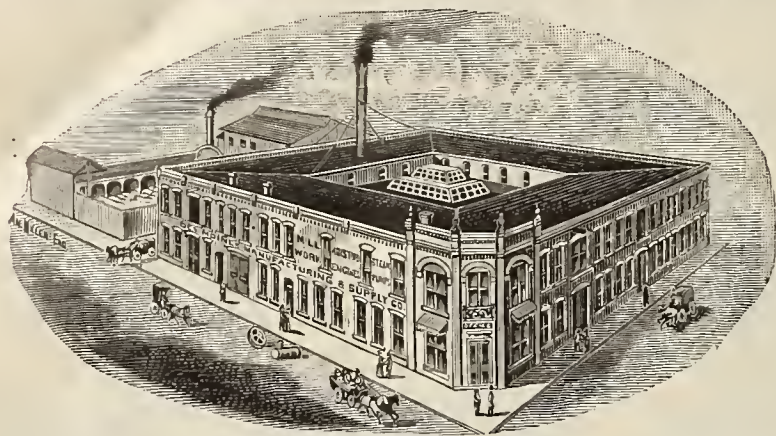
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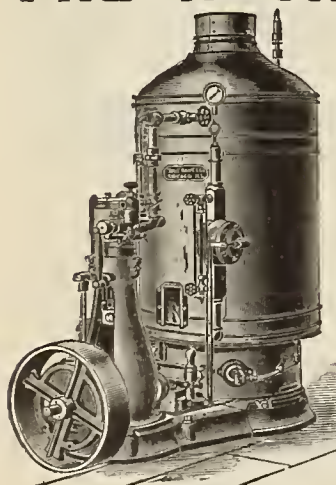
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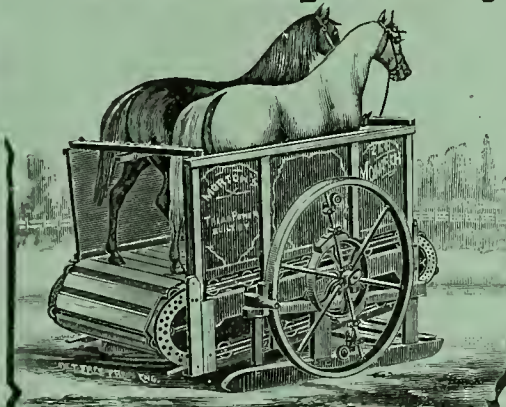
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Built Especially for Elevators.



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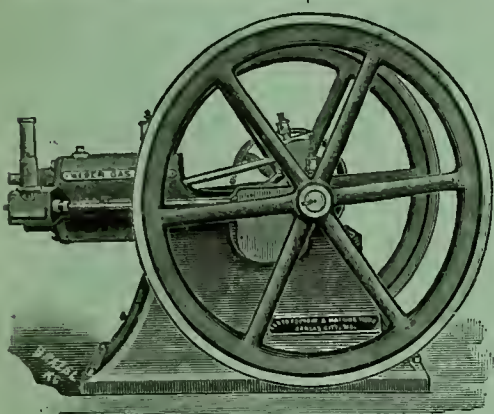
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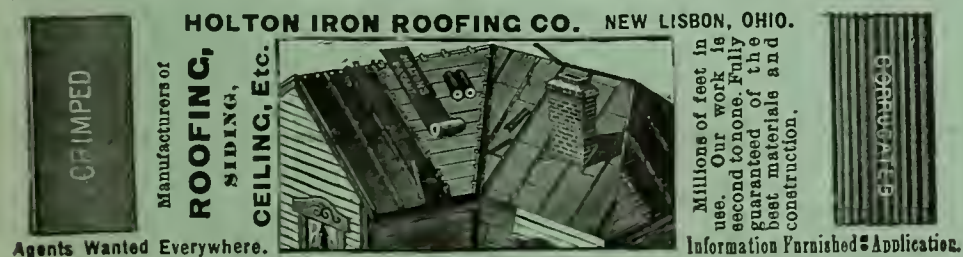
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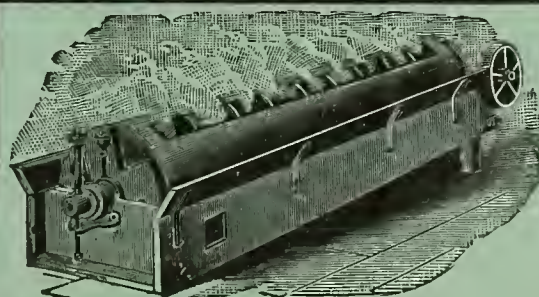
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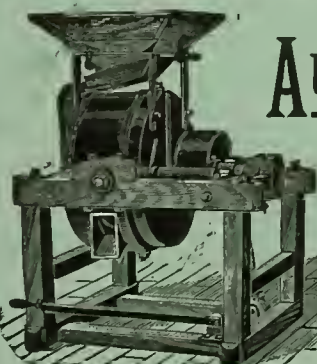


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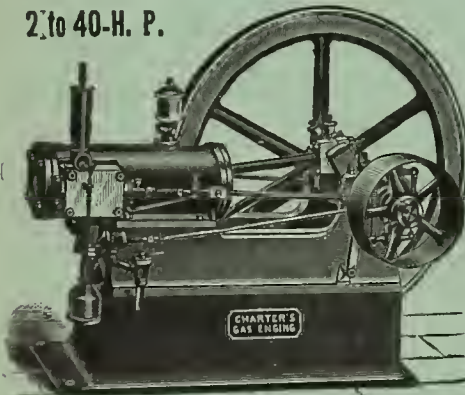
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